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Angina pain النفس ال

4 Heartburn

5 Weight loss

Achalasia كيف سيتم تشخيص ال

Upper gastrointestinal endoscopy, to exclude malignancy, is usually the first investigation for dysphagia.

However, barium swallow may be the best initial test for high dysphagia in older individuals, in case there is a pharyngeal pouch. In early achalasia, endoscopic abnormalities can be subtle and the endoscopy may be reported as normal.

Following endoscopy, people with suspected achalasia will usually undergo a barium swallow and oesophageal manometry.

Management of Achalasia :

There is no known cure for achalasia, and treatment is symptomatic to reduce dysphagia. The aim is to decrease lower oesophageal sphincter pressure and improve oesophageal emptying.

Treatment includes pharmacological, endoscopic, and surgical modalities

According to The American College of Gastroenterology released new guidelines for the diagnosis and management of achalasia in July 2013. Treatment recommendations are as follows:

Initial therapy should be either graded pneumatic dilation (PD) or laparoscopic surgical myotomy with a partial fundoplication in patients fit to undergo surgery

Procedures should be performed in high-volume centers of excellence

Initial therapy choice should be based on patient age, sex, preference, and local institutional expertise

Botulinum toxin therapy is recommended for patients not suited to PD or surgery

Pharmacologic therapy can be used for patients not undergoing PD or myotomy and who have (failed botulinum toxin therapy (nitrates and calcium channel blockers most common

... Pharmacological treatment علينا نشوف ال

Achalasia عنا مجموعتين بيستخدمو في حالات ال

CCB وال Nitrate ال

Calcium channel blockers (CCB) and nitrates both decrease LES pressure but do not improve LES relaxation.

Approximately 10% of patients benefit from medical treatment, which should be used primarily in elderly patients who have contraindications to either pneumatic dilatation or surgery or as a

.temporary measure while other treatments are considered

ال CCB بتمنع ال Ca Influx في ال Oesophageal Smooth muscle وبالتالي بتمنع ال Contraction
جرعاتهم :

nifedipine 10-30 mg orally (immediate-release) three times daily

avoid the use of short-acting nifedipine because of the risk of adverse effects including severe
hypotension and ischemic complications

verapamil 80-160 mg orally (immediate-release) three times daily

بيتاخذو قبل الاكل ب 10-15 دقيقة اما ال Nitrate بتعمل Relaxation لل Smooth muscle عبر ال ... cGMP

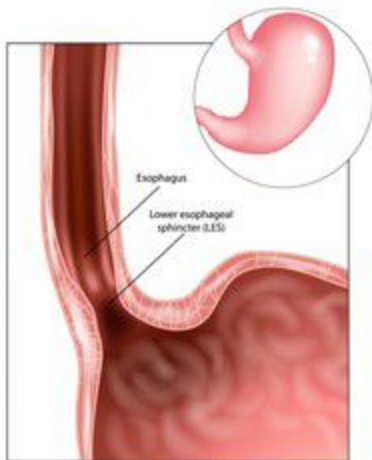
isosorbide dinitrate 5-20 mg orally (immediate-release) three times daily; 2.5 to 5 mg sublingually
three times daily

□ Sublingual isosorbide dinitrate is more potent and has a faster onset of action compared with
.nifedipine. It has also been shown to improve oesophageal emptying

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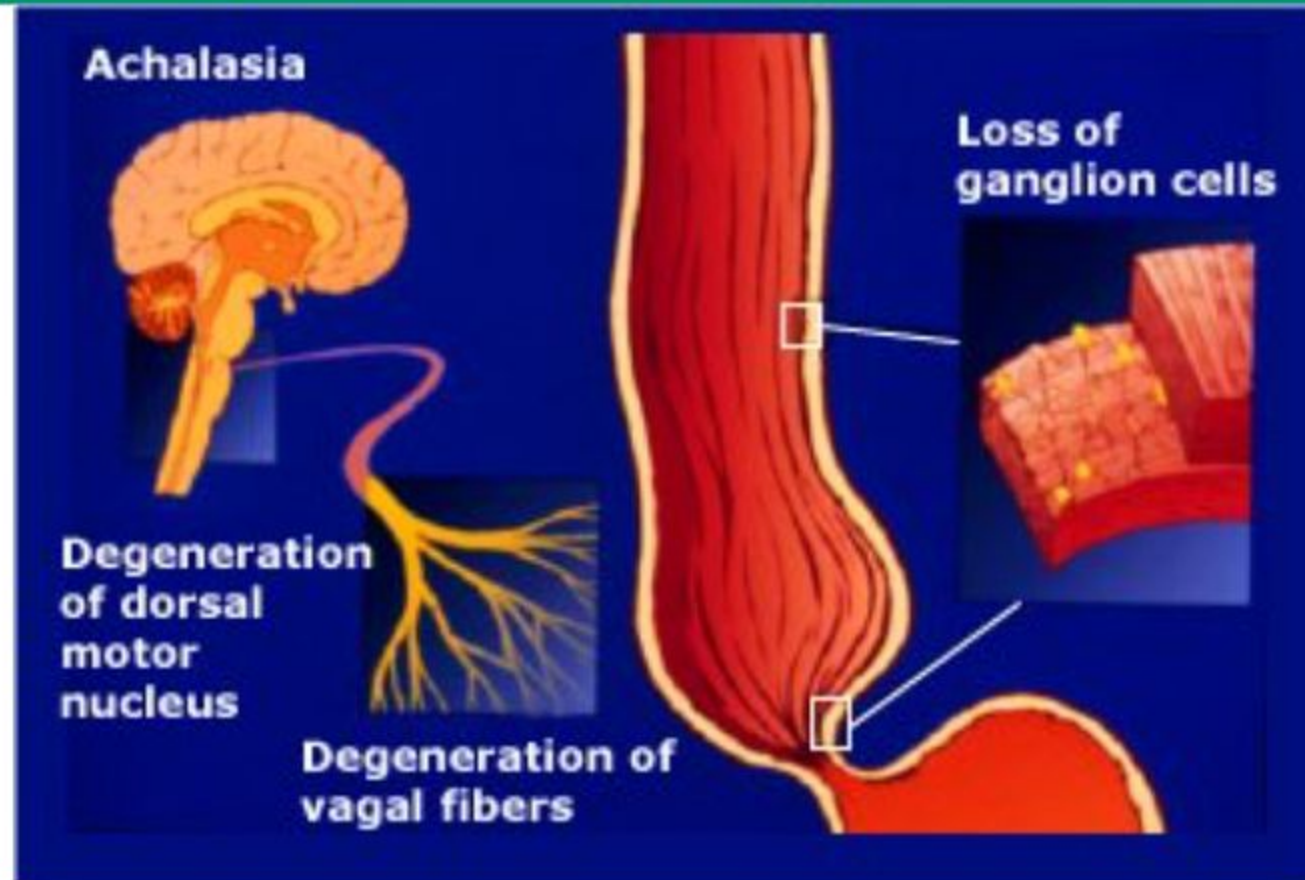


Esophageal Achalasia



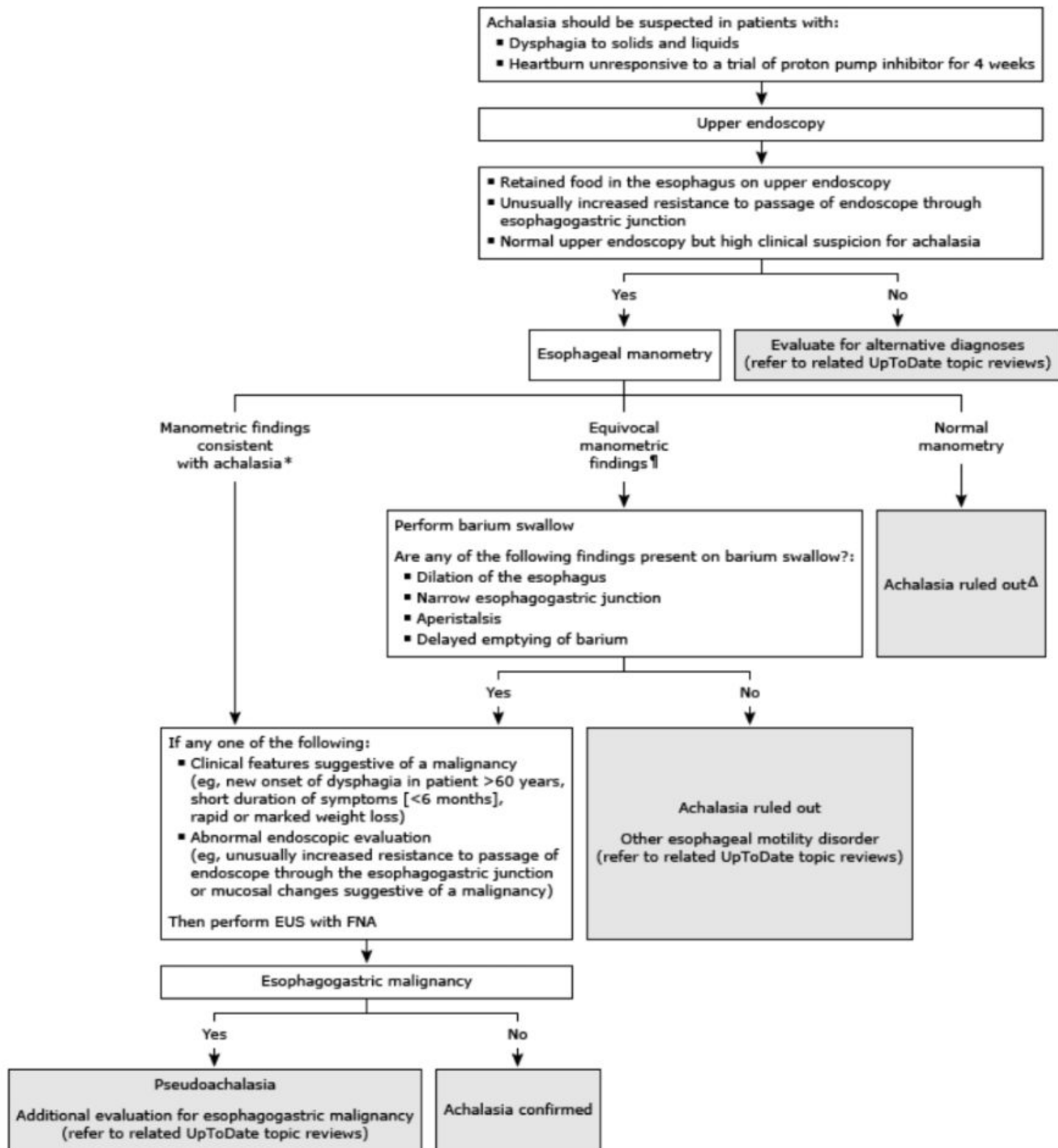
Normal

Pathophysiology of achalasia



Schematic representation of the pathophysiology of achalasia which results from the degeneration of neurons in the esophageal wall. Histologic examination reveals decreased numbers of neurons (ganglion cells) in the myenteric plexuses, and the ganglion cells that remain often are surrounded by lymphocytes and, less prominently, by eosinophils. This inflammatory degeneration preferentially involves the nitric oxide-producing, inhibitory neurons that effect the relaxation of esophageal smooth muscle, resulting in an elevation in basal lower esophageal sphincter (LES) pressure and an inability of the sphincter muscle to relax normally; the cholinergic neurons that contribute to LES tone by causing smooth muscle contraction are relatively spared^[1]. In some patients, degenerative changes also are found in the ganglion cells of the dorsal motor nucleus of the vagus in the brainstem, and Wallerian degeneration has been observed in the vagal fibers that supply the esophagus.

Diagnostic evaluation in patients with suspected achalasia



LES: lower esophageal sphincter; EUS: endoscopic ultrasound; FNA: fine needle aspiration; IRP: integrated relaxation pressure.

* Diagnostic manometric findings of achalasia are incomplete relaxation of the LES (IRP above the upper limit of normal) and aperistalsis in the distal two-thirds of the esophagus.

¶ Equivocal manometric findings include incomplete LES relaxation but some preserved peristalsis; some complete LES relaxation with aperistalsis.

Δ Additional evaluation should be based on patient symptoms.

Graphic 110069 Version 1.0

Diseases with manometric findings of achalasia

Malignancy, especially gastric carcinoma
Chagas disease
Amyloidosis
Sarcoidosis
Neurofibromatosis
Eosinophilic esophagitis
Multiple endocrine neoplasia, type 2B
Juvenile Sjögren's syndrome with achalasia and gastric hypersecretion
Chronic idiopathic intestinal pseudo-obstruction
Anderson-Fabry disease

Primary options

isosorbide dinitrate: 5-20 mg orally (immediate-release) three times daily; 2.5 to 5 mg sublingually three times daily

OR

nifedipine: 10-30 mg orally (immediate-release) three times daily

OR

verapamil: 80-160 mg orally (immediate-release) three times daily

Chronic Cough ,Asthma like symptoms ,Recurrent Sore throat , laryngitis or Hoarseness ,,sinusitis ,Otitis media ,Aspiration Pneumonia ,Bronchitis ,Chest pain

اي علامه من هذول العلامات سواء معها Typical symptoms او لا
بأشك بال GERD لانه ممكن يكون ال Acid Reflux وصل ال Respiratory system وعمل المشاكل السابقه
لكن وجود هاي العلامات ما بتخليني أشخص انه المريض GERD
يعني مثلا مريض جاي ب Chronic cough لازم ينعمله Refer لطبيب صدرية ويكشف عليه منيح ويشوف لو في عنده سبب لل
Cough لو ما كان في سبب لل cough ساعتها ممكن نشك ان الحاله GERD

طبيب لو اجاني مريض عمره 32 وبيقولك حاسس بحموضه مع الاكل ويكون ماسك فم المعده وبيقول المنطقه هاي بتوجعني مع
وجود Chest Pain وبتزيد مع الأكل ؟
بهاي الحاله لاززم تطلب ECG لانه ممكن جدا تكون Stable Angina ويروح فيها لو تأخر تشخيصه
ف أي مريض بيباني لأول مره من اعراض GERD و chest Pain وخصوصا لو male
لازم يعمل ECG لاستبعاد ال Unstable Angina

فلازم Refer لكل ال ... Atypical Symptoms

3- Alarm symptom ممكن يجي مريض ال GERD ب

في عنا سبع علامات لو اجا فيهم المريض ،لازم ولا بد من انه يعمل Endoscope
1 Dysphagia

لو مريض جاي ب Heartburn وبيقولك عندي صعوبه بالبلع
لازم يعمل منظار

2 Odynophagia

لو المريض جاي ب typical symptom مع ألم عند البلع
لازم يعمل منظار

3 bleeding

لو مريض اجا باعراض GERD مع نزيف لازم يعمل منظار

4 Weight loss

لو وزنه عمال بينزل لازم يعمل منظار

5 Chocking

لو ببحس حاله بنخنق مع الاكل لازم يعمل منظار

6 Epigastric mass

بيلزمه منظار

7 Chest pain

وما عنده Angina فيبينعمله منظار

4- ممكن يجي المريض بأعراض Complicated

لو كان GERD وسایب حاله من غير علاج
أهم هاي ال Complication هي ال Erosion تأكل خلايا المرئ
كل ما ال Acid يطلع كل ما ال Esophageal cell بيصيرلها تأكل
الجسم بيروح يعوض الخلايا المتأكله ب Goblet Columnar Cell
وبنسمي حاله Barret Esophagus
وال Barret لو ضل المريض Uncontrolled بتقلب مع السنين ب
Esophagus Cancer

□□□□□□□□□□□□□□□□

يبقى الملخص انه ال GERD بيصير فيه ارتجاع لحمض المعدة من المعده للمرئ

٤. ممكن يجي المريض ب Typical Symptoms وساعتها هبدأ بعلاج ال GERD

٤. ممكن يجي المريض ب Atypical symptoms وساعتها بنعمله Refer

٤. ممكن يجي المريض ب Alarm symptoms وساعتها لازم يعمل Endoscope

البوست القادم رح نكمل مع ال Diagnosis وال Ttt

#لعلي أفيدك ؟

Esophagus

Diaphragm

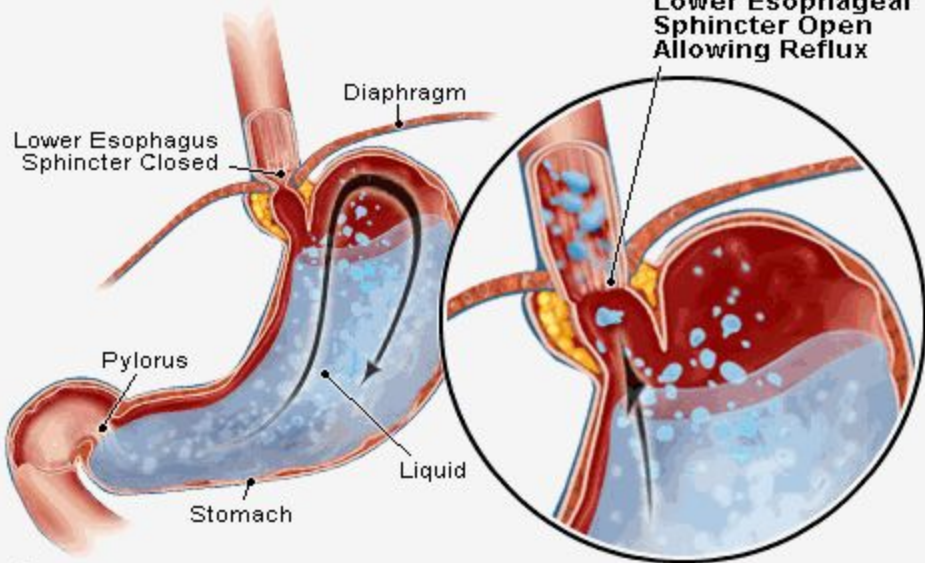
Lower Esophagus
Sphincter Closed

Pylorus

Stomach

Liquid

Lower Esophageal
Sphincter Open
Allowing Reflux



Gastroesophageal Reflux

What are the symptoms of GERD ?

Symptoms of GERD

```
graph TD; A[Symptoms of GERD] --> B[Typical symptoms]; A --> C[Extraesophageal symptoms (formerly referred to as atypical)]; A --> D[Alarm symptoms];
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Typical symptoms

Heartburn (pyrosis)
Regurgitation Acidic taste
in the mouth

Extraesophageal symptoms (formerly referred to as atypical)

Chronic cough, asthma-like Symptoms
recurrent sore throat, laryngitis/hoarseness,
dental enamel loss Non cardiac chest pain;
sinusitis/pneumonia/bronchitis/otitis media
are less common atypical symptoms.

Alarm symptoms

*troublesome dysphagia, odynophagia, bleeding,
weight loss, choking, chest pain, and epigastric
mass*

Odynophagia:

a dysphagia in which
swallowing causes pain.

□ Non Pharmacological treatment

النصائح التي بنحكيها لمرضى ال GERD ...

1□Dietary modification

بنحكي للمريض يبعد عن الأكل اللي ييزودله الارتجاع والحموضة
زي البهارات والقهوه

2 Reduce Food that lowering the LES Tone

عنا بعض المأكولات اللي بتقلل ال LES Tone وبالتالي بتزيد من الارتجاع زي :
القهوه ، الشوكولاته ، الكحول ، عصير البرتقال ، البصل ، التوم ، النعناع

3 Reduce Fatty meal

4□Avoid eating 2-3 hour befor Bedtime

ما يأكل قبل النوم بساعتين ، ويرفع المخد

5□Remain Upright for 2 hour after Meal

مینامش بعد الاكل مباشره ولا یمدد

6□Stop Smoking

7□Avoid Tight Clothes

8□Avoid Medication that lowering LES tone

في عنا أدويه بتعمل ارتخاء بال LES زي :

ال Alpha Antagonist زی مثلاً ال Doxazosin

ال Calcium channel blocker (CCB) زی ال Nifedepine ..

Theophyllin ,, Opioid ,, (BZs) Benzodiazepine J†

9□Avoid Drug that Delay Gastric Empty

الأدويه اللي بتقلل ال Empty للمعدة بتزود فرصه ال GERD
زى ال

Opioid ,CCB ,,progesterone ,,Tricyclic Antidepressants

□ Avoid drug that cause Gastric irritation

Corticosteroid وال NSAIDs زی ال

□□□□□□□□□□□□□□□□□□

□ Pharmacological treatment

الهدف من علاج ال GERD هو تقليل او معادله حمض المعده

فخطة العلاج رح تشمل

(Antacid Or H2 Blocker Or Proton pump inhibitor(PPI

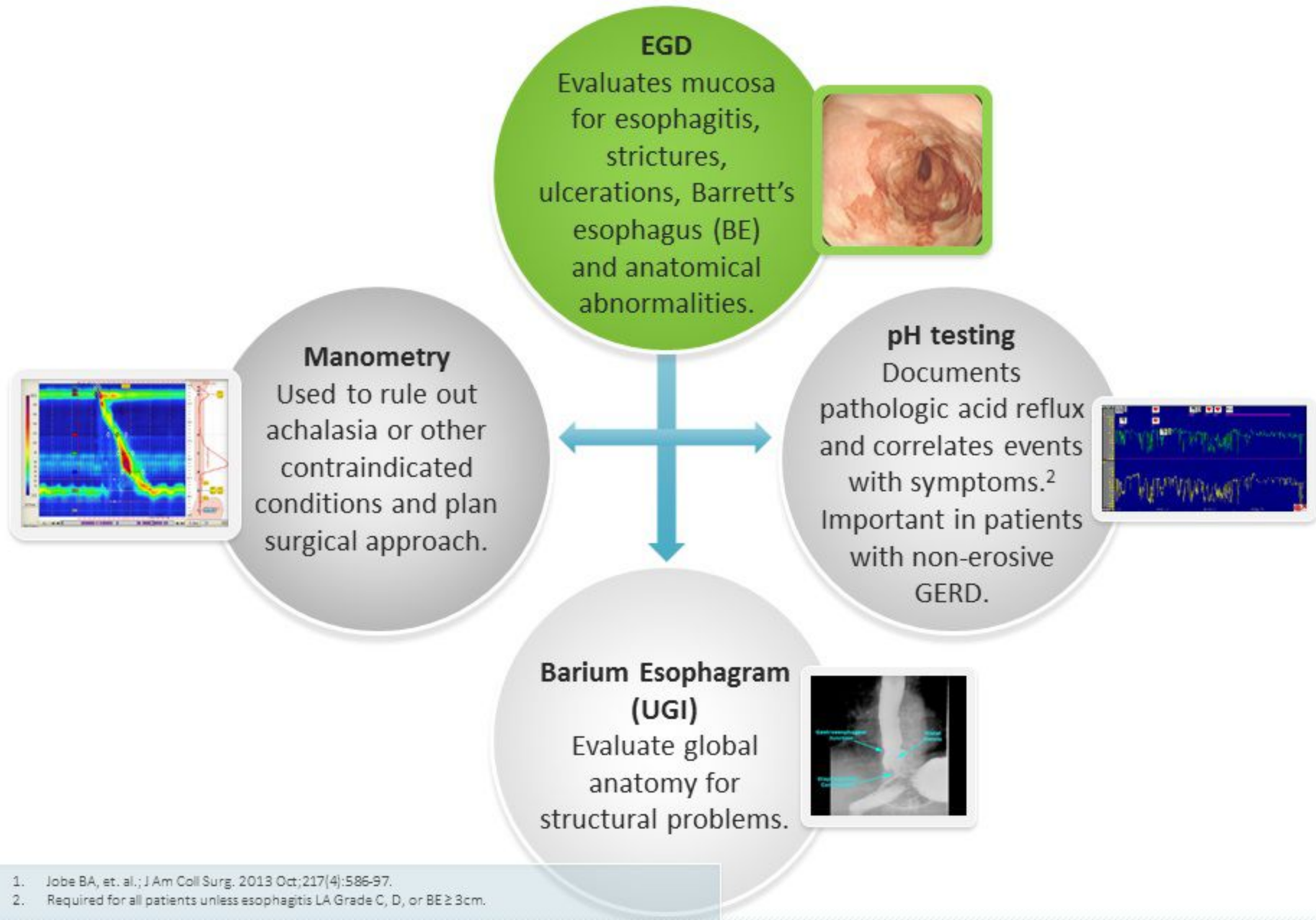
ولو في Gastric dealy بنعطي أدويه تسرع ال Gastric Empty

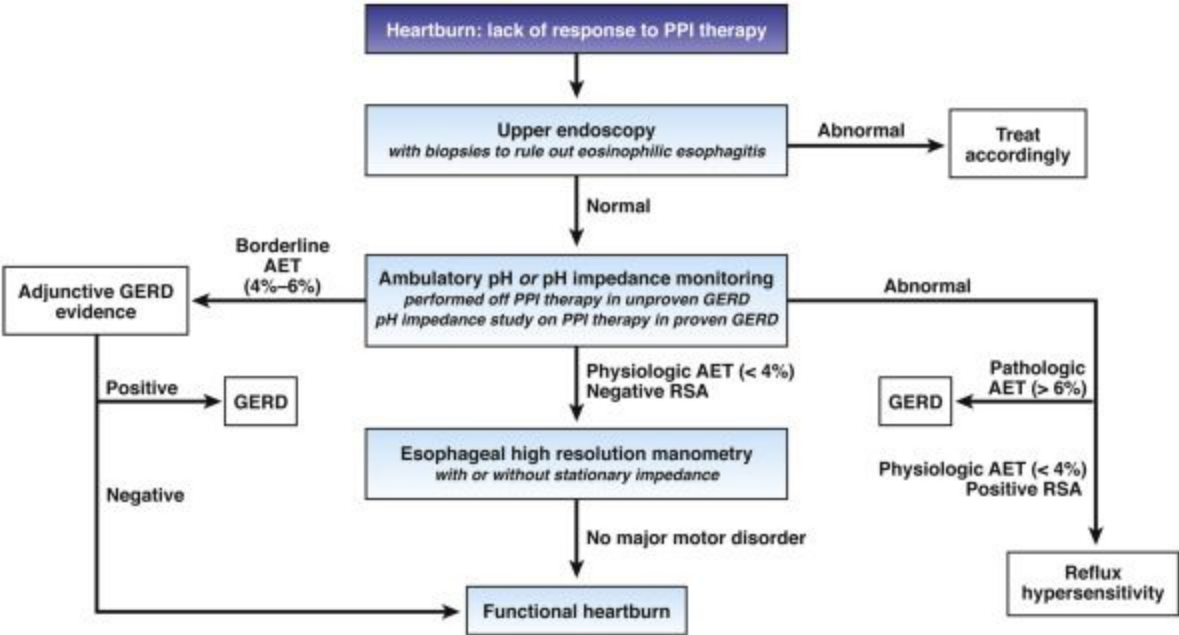
ولو فشل ال Pharmacological Ttt بنلجاً لل surgical

البوست القادم رح نعمل Refresh لل

Pharmacology of PPI □H2Blocker ,Antacid
ونبدأ بال ... Treatment guideline

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AET, acid exposure time; RSA, reflux-symptom association; GERD, gastroesophageal reflux disease

اليوم ان شاء الله رح نشوف الأدوية اللي بنستخدمها في علاج ال GERD من ناحية Pharmacology ونفهمهم قبل ما نشوف ال ... GERD Guideline

[illegible]

خلايا ال Parital cell عليها ثلاث انواع من ال Receptors

Vagal supply وبيتحفز بال

ويحفزه وجود الهستامين

.....

كل هاد ال Cascade اللي صار هدفه بالآخر أحصل على ال H+

ال H⁺ + يخرج من ال Parital cell ويروح لل Gastric Lumen يتحد فيها مع ال Cl⁻ - ويتكون عندي ال HCL ..

□□□□□□□□□□

H2 Receptor ال ادويه تغلق

او ادويه تروح تثبط ال H/K Atpase pump وتمنع خروج ال H
او ادويه قلوية تعادل ال HCL الحمضي المتكون

جربو هاي المجموعات كلها ، ووجدو انه الادويه اللي Effective في تقليل او منع ال HCL

1❖ هي الادويه اللي بتغلق ال H2 وطلعت عنا مجموعه كبيره من الادويه تحت عيله ال H2 Receptor Blocker

2❖ الادويه اللي بتثبط عمل ال Pump وبالتالي ما حيطلع ال H من ال Parital cell من الاساس ولا حيروح يتحد مع ال Cl
وطلعت عنا مجموعه كبيره اسمها Proton Pump Inhibitor (PPI)
وهي اكثر مجموعه Effective لانها بتمنع تكوين ال HCL

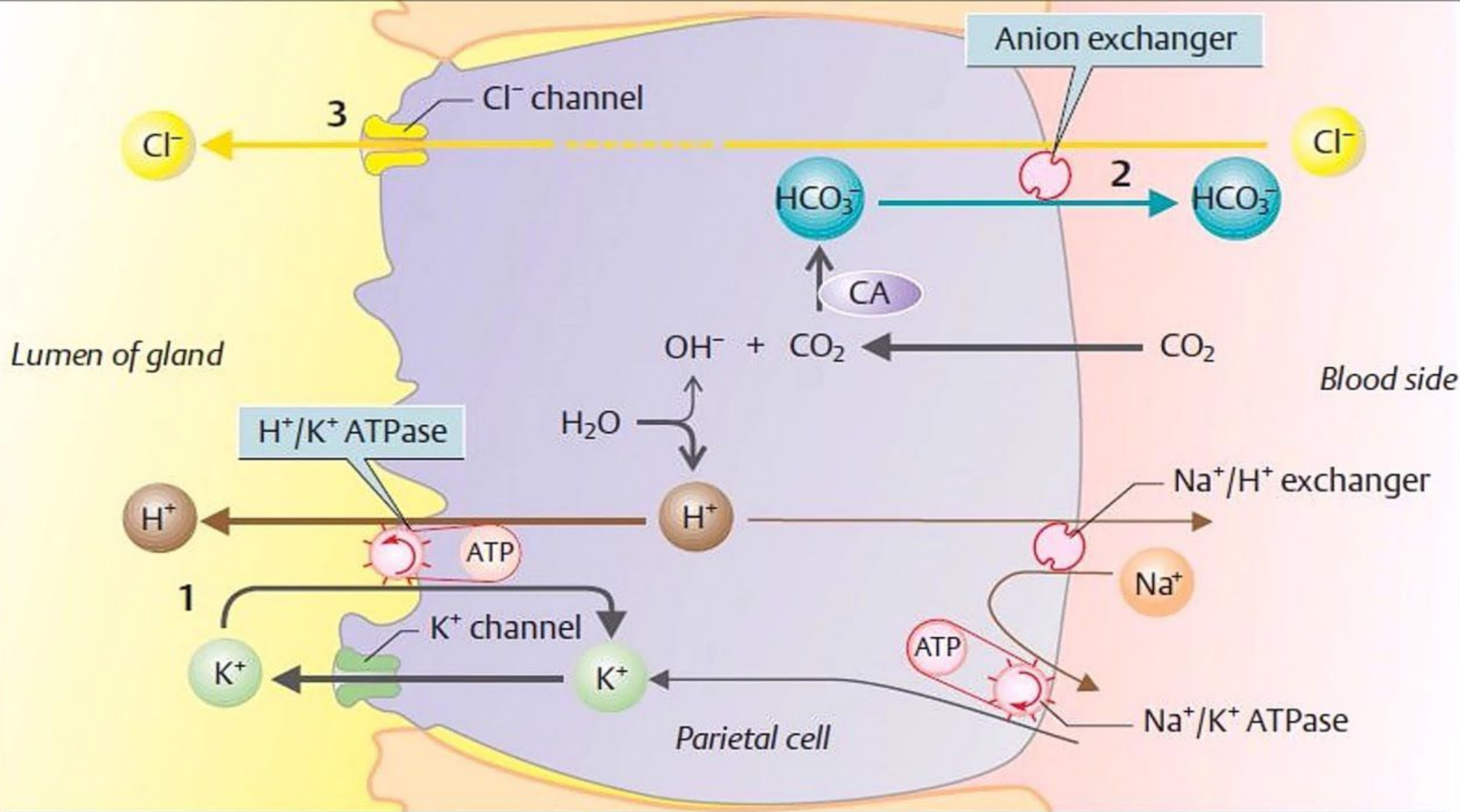
3❖ الادويه القلوية اللي بتعادل ال HCL

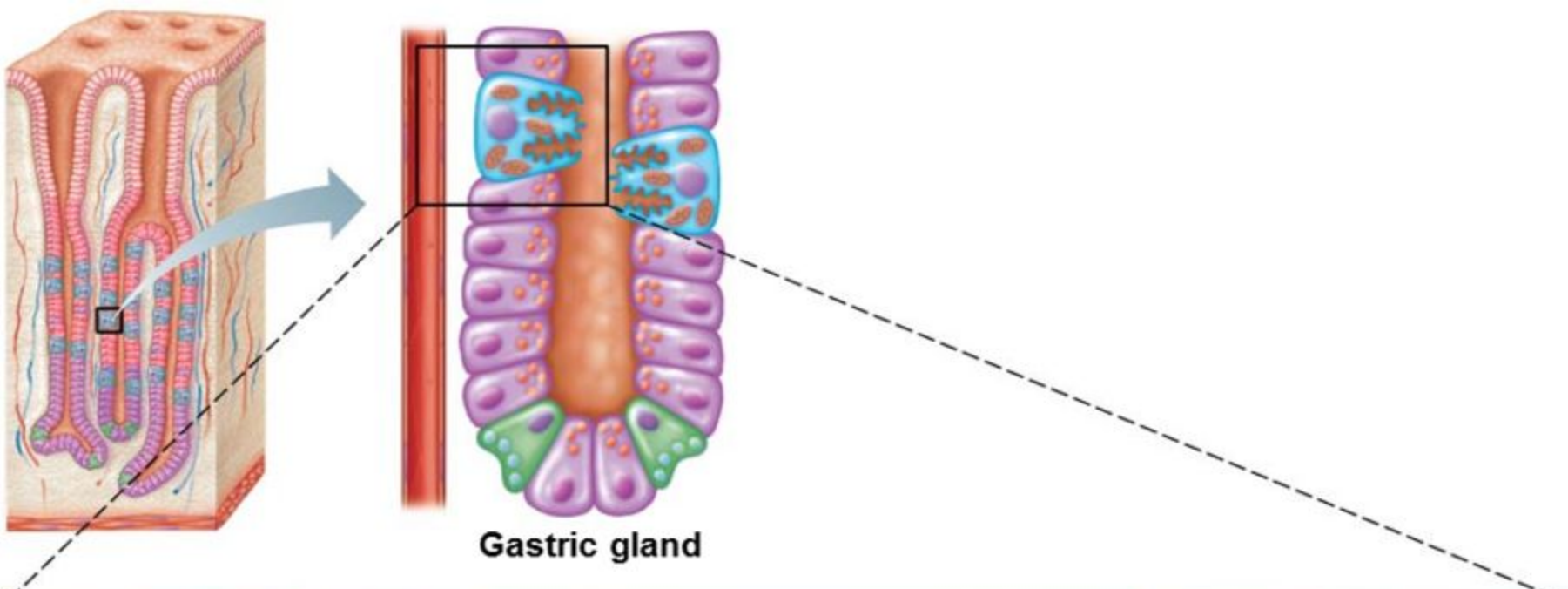
زي ال

(Antacid (ALOH ,MgOH ,CaCo3 ,NaHco3

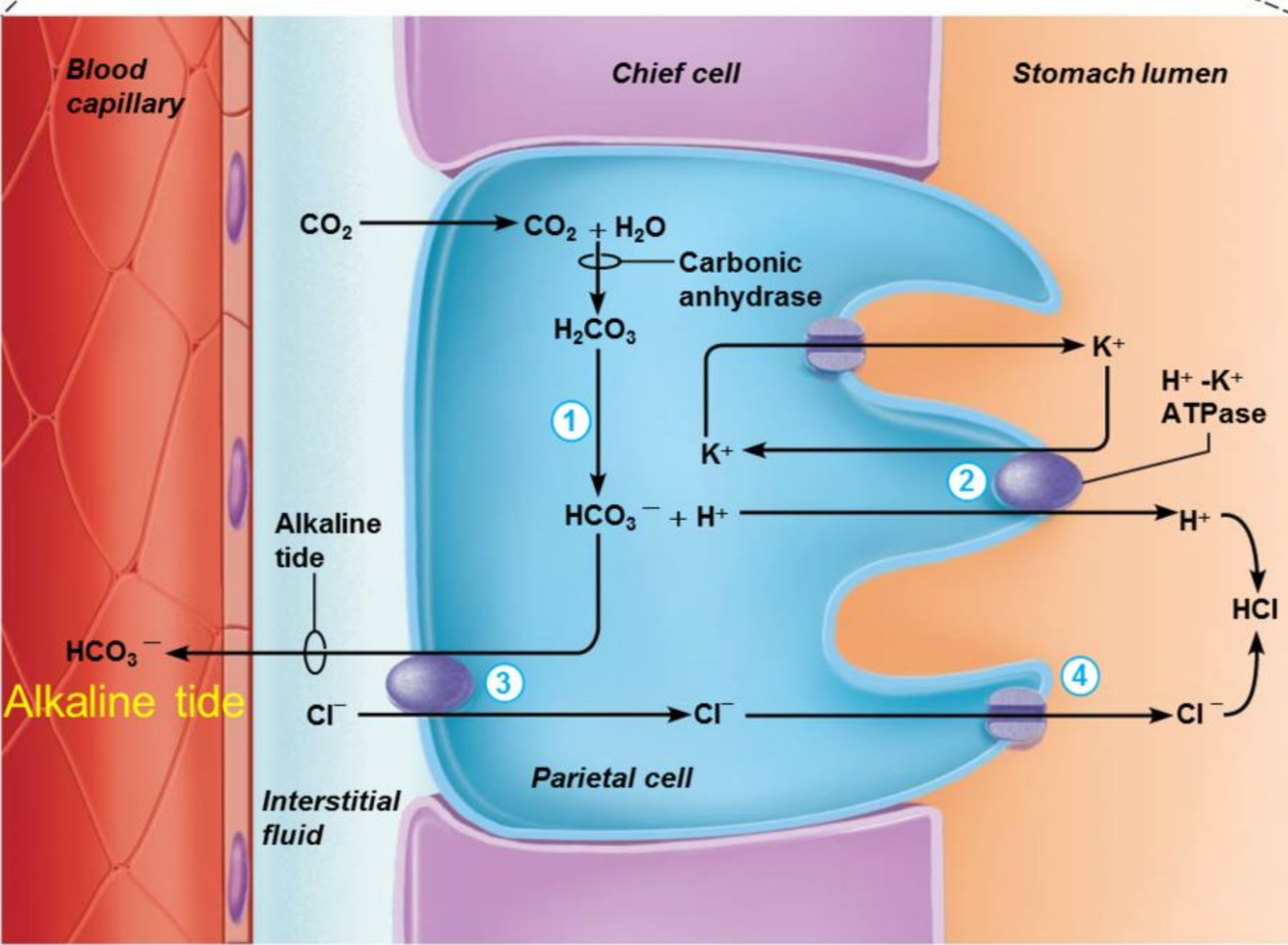
رح نشوف هاي المجموعات من ناحيه الفارما بالتفصيل ان شاء الله بالبوستات القادمه

#لعللي أفيدك❖





Gastric gland



Drugs Used In GERD:

Anti Acids & Alginates

- Sodium Bicarbonate
- Calcium Carbonate
- MgOH
- AlOH
- Mg&Al Comb.
- Alginic Acid
- Sodium Alginate

H₂-receptor Blockers

- Cimetidine
- Famotidine
- Ranitidine
- Nizatidine

Prokinetic Agents:

- Metaclopramide
- Domperidone
- Cisapride

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.....

تاني مجموعه هي ال H2 Blocker

هي الادويه اللي بتغلق ال H2 Receptor فبالتالي بتمنع تكوين ال HCL بنسبه 70% ..
بتتأخذ قبل الأكل بنصف ساعه ،عشان تلحق تغلق ال H2 قبل الاكل

من أمثله هاي المجموعه :

..... Cimetidin ,Ranitidin ,Famotidin ,nesatidin

ال Prolong use لهاي المجموعه يعمل Tolerance

اغلب SE لهاي المجموعه بتكون Tolerated

Headache ,Dizziness ,Fatigue ,,Confusion زی ال

ال Cimetedin إله SE ممیزه

Antiangiogenic SE

Gynecomastia in men , Reduce Sperm Content ,Impotancy ,Inceas Prolactin level

(□CYP450 Inhibitor (CYP1A2 ,,CYP2C9 ,,CYP 2D6 ,,CYP3A4

فبالنالي بيأثر على الأدوية اللي بيصيرلها metabolism عبر هاي الانزيمات
زي ال Warfarin ,Theophyllin

□ Reversible Hepatitis ,and bone marrow depression

يمكن مع الاستخدام الطويل تسبب Anemia ..

□CNS SE

في كبار السن بعض الحالات اللي بتمشي ع Cimetedin لفره طويله بتخرب عندهم مخارج الحروف وبيصير يتهته بالكلام وبيأثر على افكار المريض فبيعمل افكار انتحاريه

Dont Stop Antihistamin Suddenly ☐

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

تالت مجموعه والأخيره هي ال PPI

.. Omeprazol ,Esomeprazol ,Pantoprazol ,Lansoprazol

بیشترین ال H/K Atpase pump بشكل Irreversible

Long Duration Inhibition لل HCL بنسبه 96-100% والها

های الأدوية كلها Prodrug وعشان تشتغل لازم تتأكثف داخل ال Gastric Gland

فالدوا بينزل للمعدة ويوصل لل Intestine ويصير له امتصاص بالدم

و يدخل عبر ال Stomach blood supply لداخل ال Gastric cell

ويبتأكتف فيها عبر ال HCL ويبروح يثبط ال Pump من داخل ال parital cell

ف عشان يشتغل الدواء ممنوع يتأكتف داخل ال Gastric lumen

عشان هيك بيكون معمول Enteric Coated Tablet ليقدر يمتص ويوصل لداخل خلايا المعدة ويثبط ال Pump من الداخل
ف لذلك يؤخذ قبل الأكل بنصف ساعه

أشهر SE لهاي المجموعه :

Increases Fracture Risk □

ادويه ال PPI بتروح ع ال Bone ويتمنع ترسيب ال Ca بالعظم

فالمرضى اللي عندهم Osteoporosis بنعطيههم أقل جرعه ممكنه لأقل مده ، وبنأكد ان المريض عنده

.. Adequate level of Calcium and Vitamin D

ولو المريض عنده Low Bone mass بنعمله BMD screen

□Hypomagnesemia

أي مريض ماشي ع Digoxin او Diuretic بنقيسه ال Mg قبل ما يبدأ ع PPI

□Clostridium difficile associated Diarrhea

□ increases Risk Community Acquired Pneumonia

ال PPI بترفع ال Stomach PH فيسهوله لانتشار البكتريا فبتوصل لل lung وبتعمل Pneumonia

□ Drug Interaction □ ال Omeprazol يثبط ال CYP2C19 فلو المريض يأخذ Diazepam يقل ال Metabolisim لاله

...

لو المريض ماشى Clopidogrel ومن المعروف انه ال clopidogrel يحتاج ال CYP2C19 عشان يأكثفه ويقدر يشتغل

ففي حال تثبيط الـ CYP2C19 الـ Clopidogrel ما حيقدر يشتغل

فإن FDA تمنع إعطاء ال Clopidogrel مع ال Omeprazol

وبتفضل استخدام الـ Pantoprazol لأنه أقل واحد في الـ PPI يعمل تثبيط CYP2C19

اما في منظمات تانيه بتسمح باعطاء ال omeprazol مع ال Clopidogrel وبتعتبره Minor Interaction

❖تانی Interaction لل Omeprazol هو مع ال Methotrexat

ال (Methotrexat (MTx) يخرج من الجسم عبر Pump في ال Renal وهاي ال Pump بتشبه ال Pump الموجوده بال

Parital cell

فال omeprazol بی‌ثبط های ال Pump فبیتراکم ال MTx بالجسم و بی‌عمل Toxicity ..

ف الحل للمرضى، اللي بياخدو High dose of MTx انهم يستخدمو مجموعه ال H2 Blocker بدلا من ال PPI

ولو المريض مضطر يأخذ ال PPI بنقله يوقفه قبل ال MTX بيومين وبعد جرعه ال MTx بيومين

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

كل المجموعات السابقة بما انها بترفع ال Stomach PH فيتأثرع الأدوية اللي بتحتاج وسط حمضى للامتصاص

ف أي دوا يحتاج وسط حمضي للامتصاص رح يقل امتصاصه

ketoconazol ,,Itraconazol ,,Iron ,,Atazanavir ,,dilaviridine ال ذی

„indinavir „nilfinavir

والادويه اللي بتحتاج High PH ليصيرلها امتصاص ،رح تزيد امتصاصها زي:
Saquinavir ,,Raltegravir
وهيك بنكون أجملنا الأدوية اللي بتستخدم لل GERD

البوست القادم رح نشوف مريض ال GERD ع شو بنمشيه من الادويه السابقه والجرعات ان شاء الله
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MANAGEMENT OF GI DISORDERS

Antacid

- Aluminum Hydroxide
- Magnesium Hydroxide
- Calcium Carbonate

H2 Blockers

- Famotidine
- Ranitidine
- Cimetidine

Proton Pump Inhibitors

- Omeprazole
- Pantoprazole
- Rabeprazole

يسعد مساكم ٤

GIT#

#بوست 6

شفنا بالبوستات السابقة تعريف ال GERD وشو الاعراض اللي بيحي فيها المريض وشو الادويه اللي رح نستخدمها ...

وعرفنا انه مريض ال GERD رح يحي بحاله من الحالات التاليه :

Typical Symptoms only 1

مريض بيشكي من Heartburn وارتجاع

Atypical Symptom 2

3 More than 45 Years old and undergo Endoscopy and Show No erosive & No barret

4 More than 45 years and Undergo Endoscopy and Show Erosive

5 Alarm Symptoms and undergo Endoscopy and Show No erosive & No barret

6 Alarm Symptoms undergo Endoscopy and Show erosive

7 Barreit Esophagus

اليوم ان شاء الله رح نشوف ال

Guideline Management of GERD

جايدلاين العلاج حنقسمه لقسمين

1

مريض عمره أقل من 45 سنه وعنده Typical Symptom

هاد المريض حنعالجه على حسب ال

Frequency & Duration & severity of Symptoms

1 لو كان المريض Mild Symptoms يعني اعراض خفيفه وبتجيه هالأعراض اقل من مرتين خلال الاسبوع

بهلحاله بيكون ال First Choise هو ال Antacid مع ال Life style modification

اشهر ال Antacid

® Maalox ® ,Gaviscon

طيب فرضا المريض ما ارتاح على ال Antacid بنمشي معه على ال Step Up Approach

ال Step Up بيعتمد على انه نبدأ بأقل دوا فعاليه للحموضه ونطلع لحد ما نوصل لأكثر الادويه كفاءه كمضادات حموضه (PPI)

Antacid Low Dose H2 blocker Standard Dose H2 blocker PPI

فالحل هو استخدام ال H2 Blocker او ال PPI بجرعات مخفضه

Nizatidine 75 mg onco or Twice

Rabeprazol 10mg once

فبنعطي PPI بال Low Dose لمدة اسبوعين

□□□□□□□□□□□□□□□□

1

14 لو طلع ما في Erosive ووضع المريض تمام فيبمشی ع PPI لمدة اربعة اسابيع

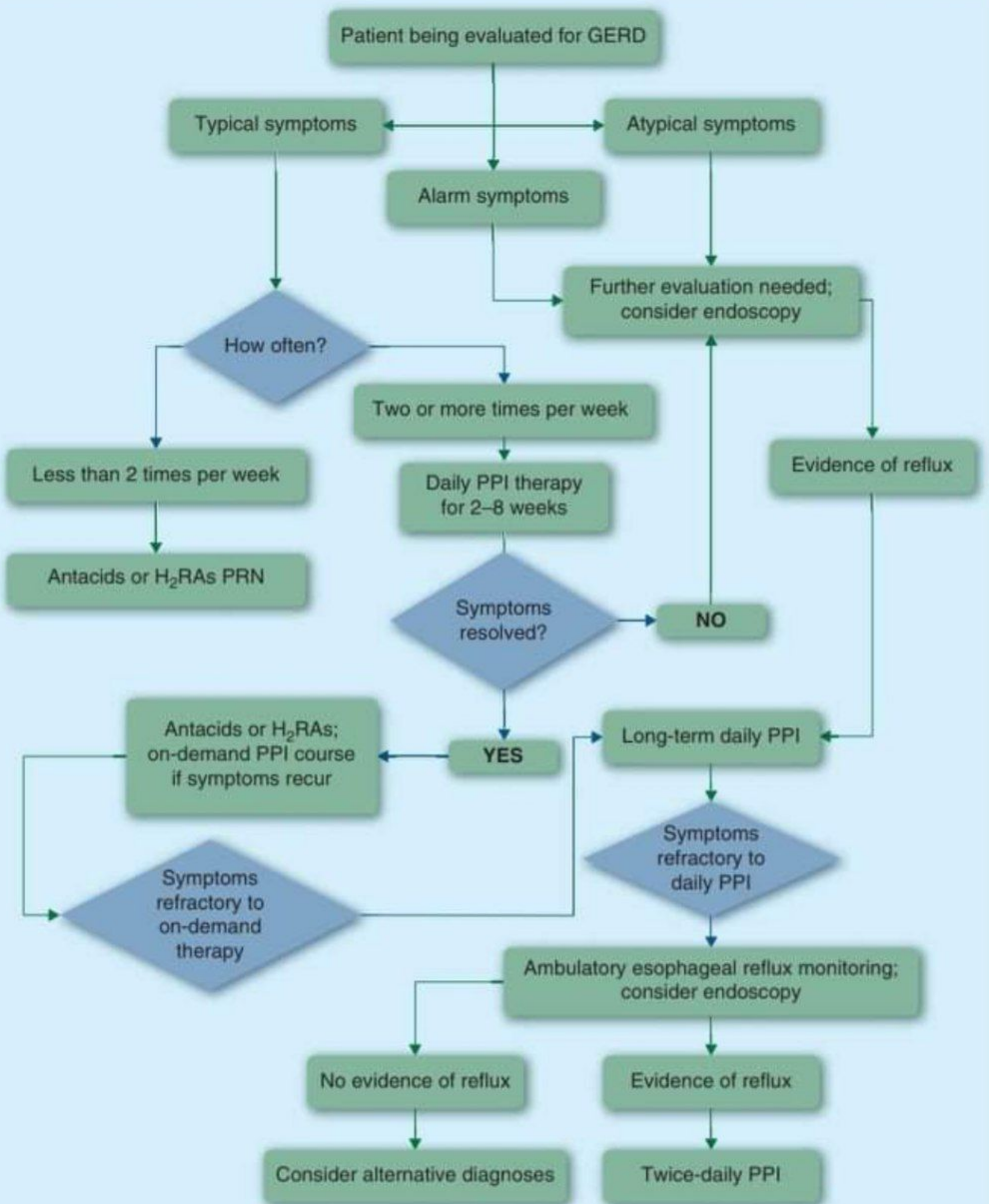
❖❖ لو في Response والمريض تحسن تماما بنعمل Tapering لل PPI بالتدريج وبنمشي المريض ع PPI عند اللزوم

بنرفع جرعه ال PPI ل Twics Daily او بنضيف H2Blocker على ال Once Daily PPI

PH ambulatory test & Mamometry ويحتاج

البوست القادم رح نبدأ ان شاء الله بال Peptic Ulcer

#لعلی أفیدك ؟



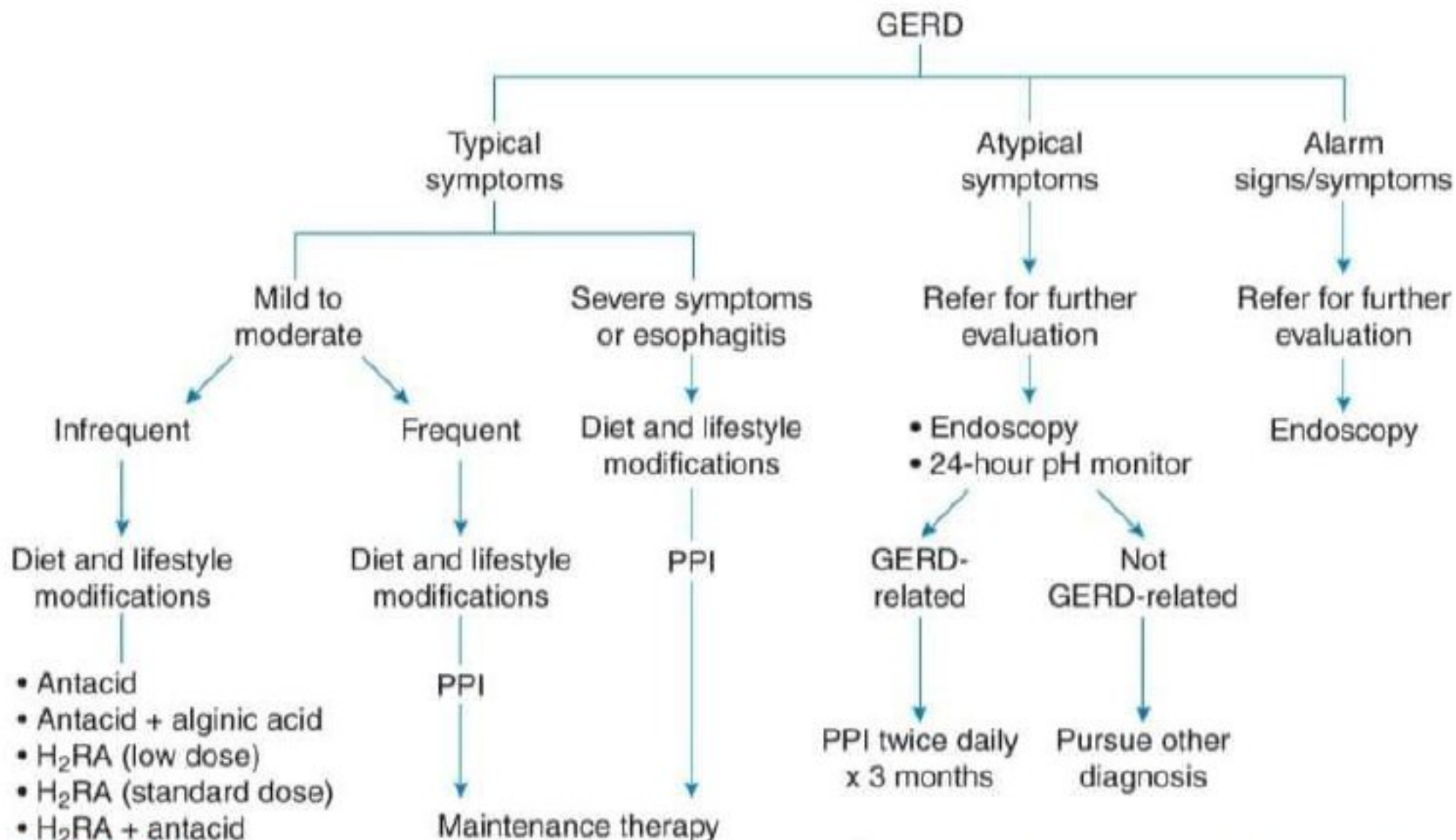
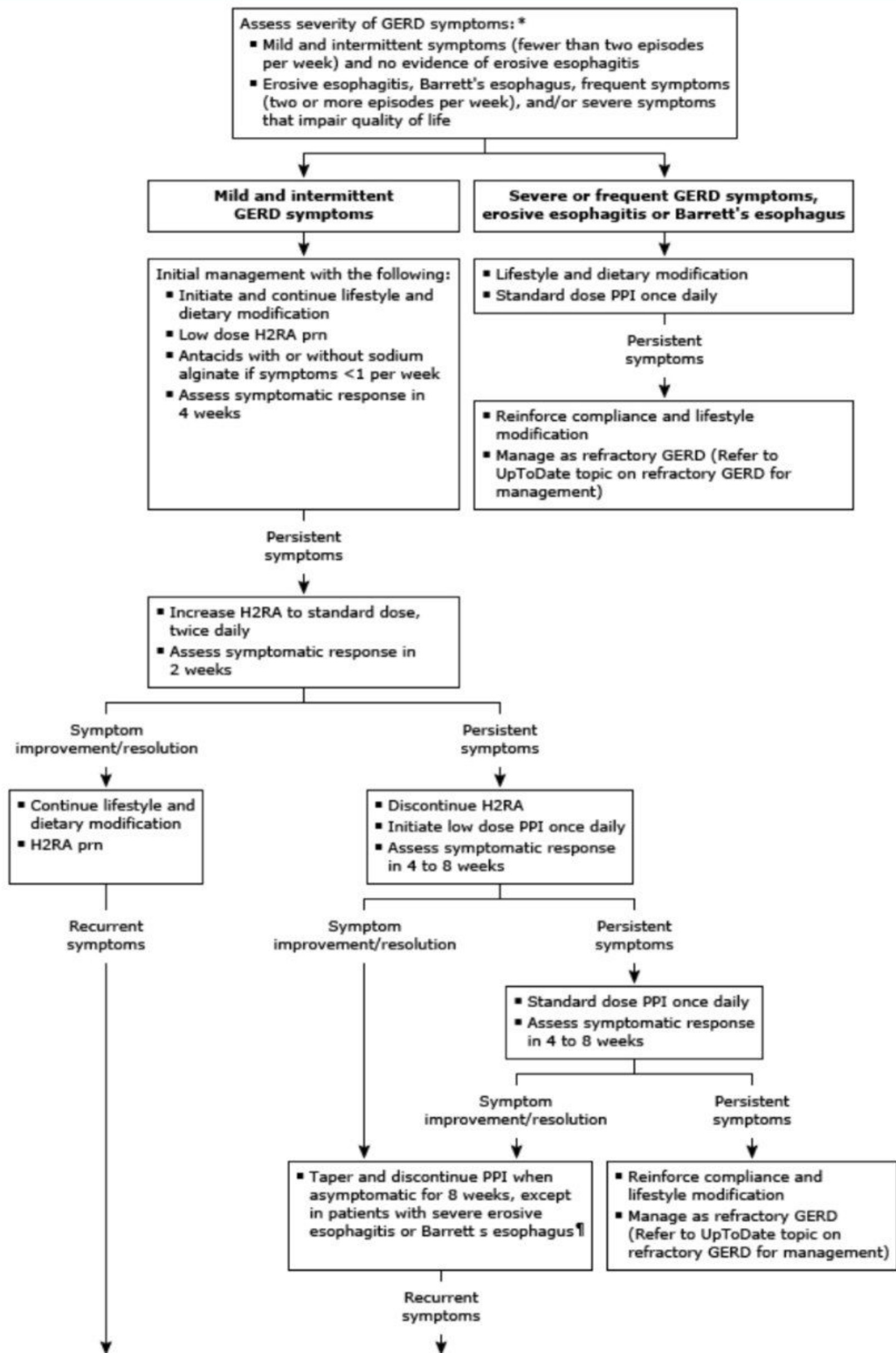


Figure 23-5 Management of GERD. GERD, gastroesophageal reflux disease; H₂RA, H₂ receptor antagonist; PPI, proton-pump inhibitor.

Initial treatment of gastroesophageal reflux disease

Medication	Low dose (adult, oral)	Standard dose (adult, oral)
Histamine 2 receptor antagonists*		
Famotidine	10 mg twice daily ¶	20 mg twice daily Δ
Nizatidine	75 mg twice daily ¶	150 mg twice daily
Cimetidine	200 mg twice daily ¶	400 mg twice daily Δ
Proton pump inhibitors		
Omeprazole	10 mg daily ◇	20 mg daily ¶
Lansoprazole	15 mg daily ¶	30 mg daily
Esomeprazole	10 mg daily ◇	20 mg daily ¶
Pantoprazole	20 mg daily ¶	40 mg daily
Dexlansoprazole	Not available	30 mg daily
Rabeprazole	10 mg daily ◇	20 mg daily

Approach to the initial management of patients with GERD



Recurrent
symptoms

- If recurrent symptoms occurred ≥ 3 months of discontinuing acid suppression: Treat with 8-week course of previously effective therapy for GERD
- If recurrent symptoms occurred within 3 months of discontinuing acid suppression: Perform upper endoscopy to rule out other diagnoses and GERD complications if not previously performed, and continue long-term maintenance therapy for acid suppression

* Upper endoscopy is not required in the presence of typical GERD symptoms of heartburn or regurgitation. We recommend an upper endoscopy if the diagnosis of GERD is unclear and to evaluate alarm features or abnormal imaging if not performed within the last three months. Upper endoscopy should also be performed to screen for Barrett's esophagus in patients with risk factors. Refer to UpToDate content on management of GERD.

¶ Patients with severe erosive esophagitis or Barrett's esophagus should remain on maintenance acid suppression with a PPI, as they are likely to have recurrent symptoms and complications if acid suppression is decreased or discontinued.

القرحتين يكون فيهم Nausea و Floating و Burning pain و Epigastric Pain

لكن بال Duodenal يكون ال Epigastric pain رايح شوي لناحية اليمين

أهم فارق بين النوعين هو امتي بيحيه ال Pain

Gastric لو المريض بعد الاكل ييجيه الوجع يكون

لأنه مع الأكل يزيد إفراز ال HCL ويزود ال Ulcer pain

اما لو كان ال Pain ييجي بعد الاكل ب 1-3 ساعات بيكون Duodenal

...

يعنى مريض ال Duodenal Ulcer برتاح مع الأكل وبيتعب مع الFasting

ومريض ال Gastric Ulcer يتعب مع الأكل وبيرتاح مع ال Fasting

وميزه ال Duodenal ulcer إنها بتزيد خلال الليل ...

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

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: Causes of PUD

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أهم سببين لل : PU

□ H Pylori Bacteria

ال H Pylori عبارة عن بكتريا موجودة عن 50% من الناس وتعتبر ك Normal Flora

يتكون ال H pylori موجوده تحت ال Mucosa

أول ما يصير Mucosal Irritation فرضا المريض اخذ NSAIDs او يياكل اكل Irritant او تعرض ل Stress

Mucosal Irritation و صا ر

بنتشط ال H Pylori ،اول ما تنشط ال H Pylori بتيجي خلايا ال Neutrophil وبتحوطها وبتطلع Interleukin Mediator

های ال Mediator بتعمل Gastritis

وال H Pylori بتروح تزود افراز ال Gastrin وبالتالي، يبيد ال HCL ويبيد ال Irritation فبتبدأ ب Gastritis ويمكن توصل

ل Ulcer حسب لو وصلت لل submucosa

طبيب بما انه ال HCL موجود و زياده ومن المعروف انه حموضه ال HCL يقتل البكتريا

ف لیس ال HPylori ما تموت بسبب ال HCL ??

لأن ال H Pylori يتزود ال HCL وبنفس الوقت يتحمي حالها منه

عبر افراز ال Urease

ال Urease بيروح يكسر ال Urea ويطلع NH_3 أمونيا

والأمونيا بتؤوح تعمل طبقه حوالين ال H pylori وبتحميها من ال HCL ..

فالمعدة يتكون مولعه بال Hyperacidity وال H pylori حاميه حالها بطبقه الامونيا ...

□NSAIDs

أدوية ال NSAIDs بما إنها تثبط ال prostaglandin فال Mucosa لل GIT تكون معرضه لل HCL بدون وجود طبقة ال

Mucus الحاميه

ال peroxixam وال Ketorolac من اكثر أدويه ال NSAIDs اللى بتعتبر High Risk لاحداث ال Ulcer ...

□□□□□□□□□□□□□□□□

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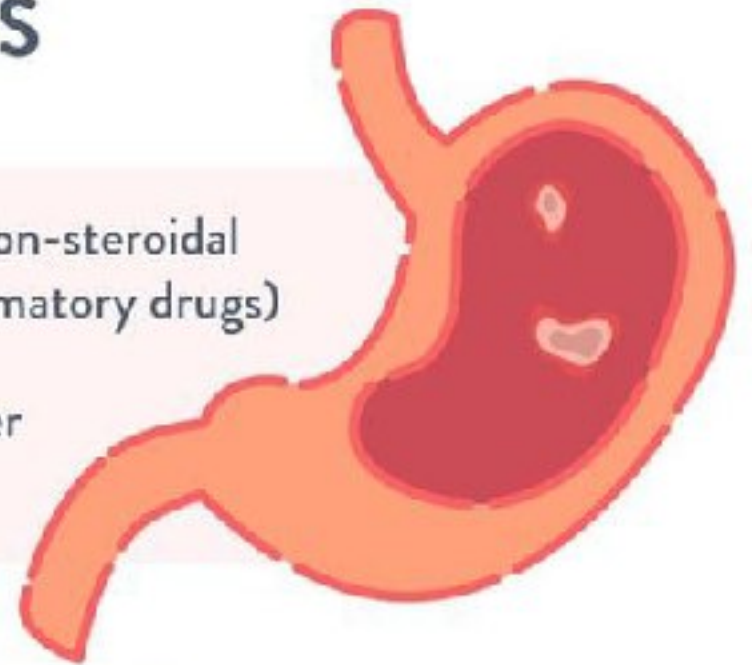




PEPTIC ULCER

● CAUSES

- NSAIDs (non-steroidal anti-inflammatory drugs)
- Helicobacter pylori



● SYMPTOMS

- Upper abdominal pain
- Nausea
- Bloating
- Lack of appetite
- Weight loss
- Heartburn

يسعد مساكم ٤

(GIT #Peptic_Ulcer_Disease(PUD#

#بوست 8

بدأنا البوست السابق تعريف ال PUD وعرفنا انه أشهر سببين بيعملو PU هم ال H-Pylori وال NSAIDs use
وشفنا الفرق بين ال Gastric Ulcer وال Duodenal Ulcer
اليوم ان شاء الله رح نكمل مع ال Investigation لل PUD ...

□□□□□□□□□□□□□□□□

في عنا طريقتين لل Investigation

□ Invasive Test (Endoscopy)

□ Non Invasive Test

ال Invasive زي ال Endoscopy

Endoscopy is the gold standard □diagnostic test for peptic ulcer disease and upper gastrointestinal tract neoplasms and its the Most Accurate , sensitive and specific for peptic ulcer disease than barium radiography

في حالات لازم ينعملها Refer لل Endoscopy ↓ ↓

Refer any patient who presents with dyspepsia together with significant acute gastrointestinal bleeding immediately (on the same day) to a specialist

Refer for endoscopy within 2 weeks any patient aged ≥ 55 years who has weight loss together with .any one of dyspepsia, upper abdominal pain, or reflux, to investigate possible malignancy

من خلال ال Endoscopy بنقدر ناخذ Biopsy من ال Ulcer ونعمل منها Test 3 لل H-Pylori

1□ Histological Test

لو في H pylori Bacteria بتبين تحت الميكروسكوب

2□ Rapid Urease Test

بياخدو ال Biopsy ويحطوها مع Urea وصبغه

وبيراقبو لو تغيرت لون الصبغه معناها في H Pylori طلعت Urease وكسرت ال Urea وحولتها لأمونيا وغيرت لون الصبغه ...

٤لو كان في Upper GIT bleeding او المريض بياخد ادويه مضاده للحموضه زي ال PPI وال H2RAs او Bismuth

في هاي الحالات ال Rapid ureas test بيطلع False negative

عشان هيك المريض اللي رح يعمل Rapid Urease Test لازم يوقف ادويه الحموضه على الاقل أسبوع قبل ال Test

3□ Culture

تنزرع ال Biopsy ع media وبعد ايام بتطلع هل فيها بكتريا او لا

ال culture مشكلتها غالبيه وبتاخذ وقت لكنها 100% Specific

□□ Offer any patient who has gastric ulcer and H pylori a repeat endoscopy 6 to 8 weeks after beginning treatment, depending on the size of the lesion.

□□ Consider endoscopy subsequent to treatment if the patient continues to experience symptoms.

□□□□□□□□□□□□□□□□□□□□

□ Non Invasive Test

ال non Invasive أسهل وأبسط :

Serologic Test 1□

بندور فيه على ال H-Pylori Antigen في الدم

لكنه مش Specific لانه 50% من الناس عندها H Pylori ومش شرط يكون عندهم قرحة

وال Antigen بيضل بالجسم ل سنه ونص بعد العلاج من ال H -Pylori

فما بنستخدمه لمعرفة هل صار Eradication لل H Pylori بعد كورس العلاج ،لانه حيطلع + سواء صار Eradication او ما صار

Urea Breath Test 2□

بيشرب المريض Urea مع كربون مشع C13

في حال وجود H pylori بتفرز ureas ويتحول ال Urea ل أمونيا

وبيضل الكربون المشع لحاله وبيطلع مع ال Breath وبينكشف من خلال جهاز بيكشف وجود الكربون المشع

المريض لازم يوقف أي دوا للحموضه والمضادات الحيويه قبل اسبوعين من ال Test

ولو بعد ما خلص الكورس بنخلي المريض يستنى 4 اسابيع بدون ادويه حموضه وبعدها ينعاد ال Test للتأكد من ال H Pylori Eradication

3□ Stool Antigen Test

تستخدم لتشخيص ال H Pylori وهو أكثر Test بيستخدم

وبنستخدمه بعد كورس العلاج للتأكد من ال Eradication

ونفس الشي المريض لازم يوقف أي دوا للحموضه والمضادات الحيويه قبل اسبوعين من ال Test

ولو بعد ما خلص الكورس بنخلي المريض يستنى 4 اسابيع بدون ادويه حموضه وبعدها ينعاد ال Test للتأكد من ال H Pylori Eradication

هيك بنكون شغنا اهم ال Tests المستخدمه لتشخيص ال Gastric

Ulcer

وطبعا بنسأل المريض عن ال History وهل بياخد NSAIDs

□□□□□□□□□□□□□□□□□□□□

مين هو المريض اللي بيلزمه يعمل □ H-Pylori Test

The 2017 American College of Gastroenterology (ACG) guidelines for the treatment of H pylori infection (HPI) include the following recommendations for testing for H pylori :

□ All patients with active or past history of peptic ulcer disease (unless previous cure of HPI has been documented), low-grade gastric mucosa-associated lymphoid tissue (MALT) lymphoma, or a history of endoscopic resection of early gastric cancer

□Patients with dyspepsia who are undergoing upper endoscopy (gastric biopsy specimens)

□Patients on long-term, low-dose aspirin

□Patients initiating long-term therapy with nonsteroidal anti-inflammatory agents (NSAIDs) or low dose Aspirin

□Patients with unexplained iron deficiency anemia following standard workup □Adults with idiopathic thrombocytopenic purpura

اي واحد من هذول الاشخاص بينعملهم H Pylori Test زي ما شفناهم

□□□□□□□□□□□□□□□□

طبيب اجانا مريض وشكيننا ب Peptic Ulcer هل استخدم ال Invasive ولا ال Non Invasive Method ??

رح نشوف متی بنجاً لل Invasive ومتی لل Non invasive

البوست القادم ان شاء الله ...

#لعلي_أفيدك ؟

Diagnostic Tests

NON-INVASIVE TEST

- **^{13}C Urea Breath test** - *Pt. with or without hx of prior peptic ulcer disease*
- ***H. pylori* Stool Antigen (HpSA)** - *Pt. with or without hx of prior peptic ulcer disease*
- **Serology** – *H. pylori* antibody titers
 - *Used for pt. with **NO** hx of prior *H. pylori* infection*

INVASIVE TEST

- **Endoscopy** – Biopsy and histological study
 - *Pt. with or without hx of prior peptic ulcer disease*

History

Epigastric abdominal pain, postprandial pain, weight loss, nausea, vomiting, history of NSAID use

For patients <60 without alarm features, in regions with *H. Pylori* prevalence > 20%

Other patients, patients >60, patients with alarm features

Test and
treat for *H.*
Pylori

Endoscopy
with ulcer
biopsy



Histological test , Biopsy Culture , Rapid Urease test

□□□□□□□□□□□□□□□□

اول سؤال بنحدد من خلاله هل هختار Non Invasive ولا Invasive

هل في Indication بيلزم المريض يعمل Endoscopy او لا؟؟

٤) لو في Indication هندخل ب Endoscopy وتشخيص ال H Pylori حيكون عبر ال Invasive Test

❏ لو ما في داعي لل Endoscopy هنجأ لل Non Invasive Test

لو خلال ال Endoscopy شفنا حاجه من التلات حاجات هداول ؟

ای حاجه من التلات حاجات هدول

بيكون تشخيص ال Peptic Ulcer عبر سحب Biopsy ويشوفو العينه تحت الميكروسكوب Histological ..

Positive for H pylori

❓ لو تحت الميكروسكوب ما طلع في H Pylori

بنعمل تیسٹ تانی للتأكد اما ال Urea Breath test او ال Stool Antigen

لو طلع احد التيستين Negative معناها المريض ما عنده H pylori

لو طلع احد التيستين Positive معناها في H Pylori

A negative biopsy result does not exclude *H. pylori* in the setting of an active upper gastrointestinal bleed, and another test (ideally a urea breath test) should be performed to confirm a negative result

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

طبيب لو خلال ال Endoscopy ما كان في Bleeding ولا المريض محتاج biopsy ولا ماشي ع أدويه معدة او مضادات حيويه بهلحاله تشخيص ال H Pylori بيكون عبر ال Urease test

لو طلع التيست + معناه في H pylori

لو طلع التيست - ف ما في H PYlori ...

□□□□□□□□□□□□□□□□

الحاله الثانيه لو المريض مش محتاج Endoscopy
فتشخيص ال H pylori بكون كالتالي :
اما بال urea breath Test او ال Stool Antigen
٤) لو طلع التيسـت + ف التشخيص H Pylori Positive

٤- لو طلع التيست - بنسأل المريض هل اخذ قبل التيست
PPI/Bismuth/Antibiotics
لو مش ماخذ فالتشخيص negative H pylori
لو ماخذ احد الادويه السابقه بنرجع نعيد التيست وينشوف

.....

Some Notes $\square$

□Medications that should be discontinued prior to testing — PPI use within one to two weeks and bismuth/antibiotic use within four weeks of testing can decrease the sensitivity of all endoscopy-based tests and non-invasive tests of active *H. pylori* infection (stool antigen and urea breath test). Patients should be advised to stop PPI therapy one to two weeks prior to testing. If feasible, testing should be performed at least four weeks after completion of bismuth/antibiotic treatment.

□Prior antibiotic treatment failures - In patients with H. pylori that is refractory to two courses of antibiotic therapy we perform culture and antibiotic sensitivity testing on gastric biopsies in order to guide treatment.

□CONFIRMATION OF ERADICATION

should be performed in all patients treated for *H. pylori* because of increasing antibiotic resistance

Eradication can be confirmed with a urea breath test, stool antigen testing, or endoscopy-based testing. The choice of test depends on the need for an upper endoscopy (eg, follow-up of bleeding peptic ulcer) and local availability. Endoscopy with biopsy for culture and sensitivity should be performed in patients with persistent *H. pylori* infection after two courses of antibiotic treatment. Tests to confirm eradication should be performed at least four weeks after completion of antibiotic treatment. PPIs should be held for one to two weeks prior to testing to reduce false-negative results. Serologic testing should not be performed to confirm eradication as patients may continue to have antibodies after eradication.

البوست القادم ان شاء الله رح نبلىش ال management of PUD
#لعللي_أفيدك؟

Tests for Hp Infection

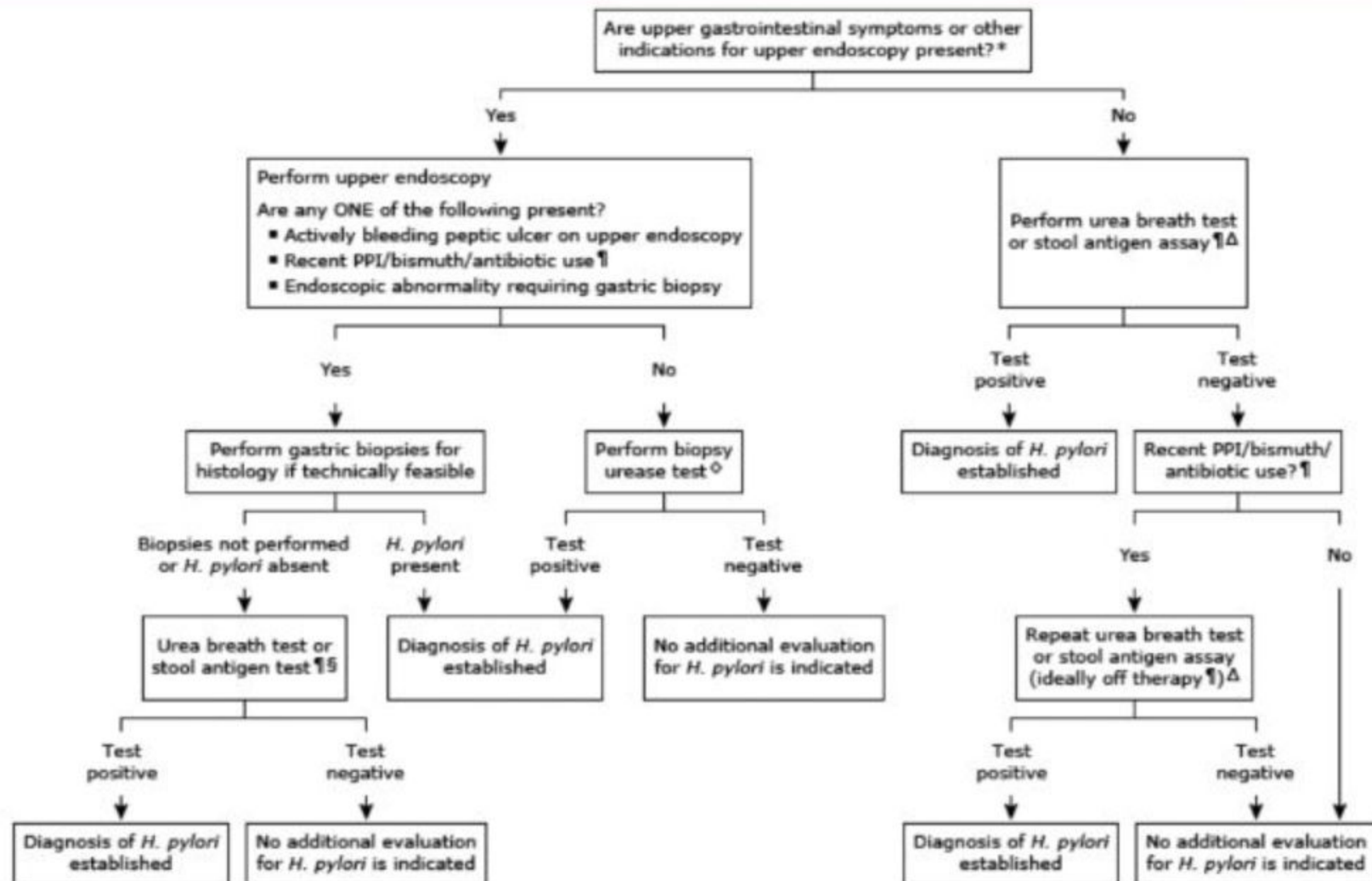
Non Endoscopic Tests

- Serology (qualitative or quantitative Ig G)
- Urea breath test
- Stool antigen test

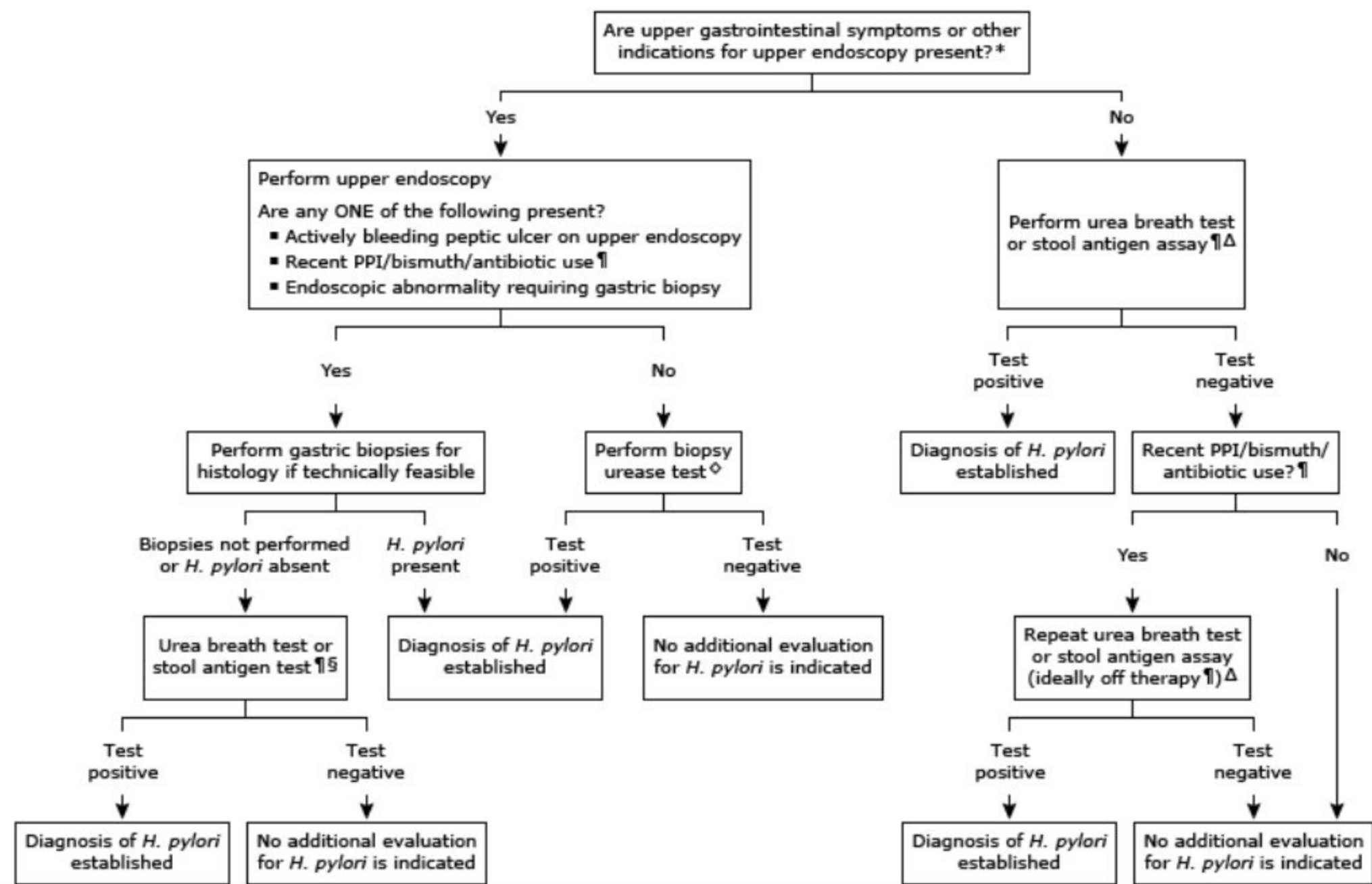
Endoscopic Tests

- Histology
- RUT
- Culture
- PCR assay

Suggested initial diagnostic evaluation in patients with suspected *Helicobacter pylori* infection



Suggested initial diagnostic evaluation in patients with suspected *Helicobacter pylori* infection



□ NSAIDs Induced Peptic Ulcer ..

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Antisecretory drug (PPI) + 2 antibiotics at least

ال Duration لل PPI يعتمد على حالة المريض ...

□ Uncomplicated PUD

(□Complicated PUD (Bleeding ,Perforation ,Gastric outlet Obstruction

maintenance الالوفي Indication لل Maintenance PPI زي ما حنشوف لاحقا ...

(omeprazole 40 mg twice daily).

Dosing should generally be reduced to once daily after four weeks.

However, in patients with bleeding, the intravenous PPI can be switched to a lower oral dose (eg, 20 mg omeprazole once daily) 72 hours after endoscopy, provided there is no evidence of recurrent bleeding. The duration of treatment depends on the location and cause of the ulcer, but is typically between 4 and 12 weeks in total.

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Antibiotics Resistances pattern , SE, ease of Administration

في عنا ثلاث Antibiotic Regimen مستخدمه في ال H pylori ttt

□ Bismuth Based Regimen

□ Levofloxacin Based Regimen

أي مريض H-Pylori بنسأل حالنا هلسؤالين ..

Are ANY of the following present?

■ Prior exposure to macrolides for any reason

■ Local clarithromycin resistance rates >15% or eradication rates with clarithromycin based triple therapy <85%*

1□ لو المريض مش ماخذ Macrolide من قبل وال Resistance لل Clarithromycin اقل من 15% وما عنده حساسيه بنسلين

فال 1st line هو ال
Clarithromycin Triple Therapy□

2□ لو المريض مش ماخذ Macrolide من قبل وال Resistance لل Clarithromycin اقل من 15% و عنده حساسيه بنسلين

فبنقرر خط العلاج حسب هل المريض اخذ قبل هيك Metronidazol

4□ لو كان ماخذ metronidazol فخط العلاج الاول هو ال

Bismuth Quadruple Therapy □

4□ لو كان المريض مش ماخذ Metronidazol بالفترة الاخيره فممكن استخدم ال

Bismuth Quadruple Therapy Or Clarithromycin Triple Therapy with Metronidazol

3□ اما لو كان المريض ماخذ من قبل Macrolide , او في Resistance لل Clarithromycin اكثر من 15%

فبهلحاله ال 1st line لعلاج ال H-Pylori هو

Bismuth Quadruple Therapy □

4□ اما بالنسبه لل Levofloxacin Regimen لا يستخدم الا في حاله كانت ال H-Pylori طالع له Sensetive لل Levo او ال Resistance لل Levo اقل من 15%

4 لكن practically عشان صعب ع كثير مستشفيات يعرفو قديش في Resistance لل Antibiotics

ف ال 1st line ببداًو بال
Clarithromycin Triple Therapy

ولو ما استجاب المريض او عنده ما يمنع استخدام ال 1st line

فببمشو ع ال 2ed line

Bismuth Quadruple Therapy Or Levofloxacin Triple Therapy

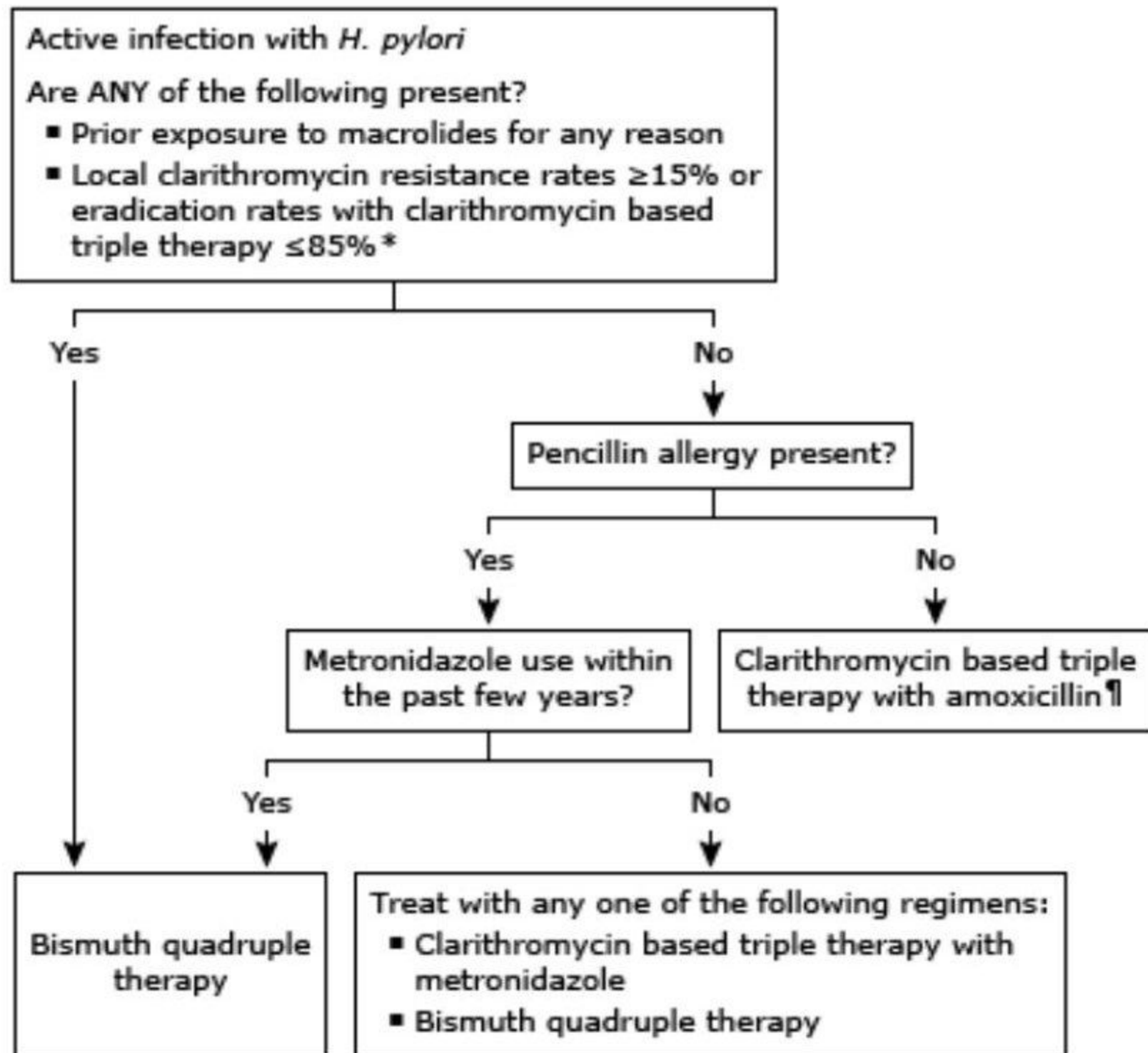
ولو ما استجاب في Other lines حنشوفهم لاحقاً ..

طيب شو هي مكونات ال Regimen اللي قلناها وكيف الجرعات اللي اللي هيمشي عليها المريض ؟

رح نفصلهم ان شاء الله البوست القادم ...

#لعللي أفيدك ؟

Initial approach to antibiotic treatment for *Helicobacter pylori* infection



- Bismuth quadruple therapy consists of bismuth, metronidazole, tetracycline, and a PPI.
- Clarithromycin based triple therapy with amoxicillin consists of clarithromycin, amoxicillin, and a PPI.
- Clarithromycin based triple therapy with metronidazole consists of clarithromycin, metronidazole, and a PPI.

يسعد مساكم ؟

GIT#

#بوست 11

شفنا البوست السابق مقدمه عن ال PUD Ttt

وَعَرَفْنَا أَنَّهُ ال 1st line هو ال

Clarithromycin Triple Therapy □

ولو ما استجاب المريض بنشفته ع ال 2ed Line

□ Bismuth Quadruple Therapy Or Levofloxacin Triple Therapy

وحيثما انه ال Bismuth Quadruple Therapy يبدأ فيه ك First line في حاله وجود Macrolide Resistance اكثر من 15%

ولو ما استجاب المريض على ال1st&2edline

بنشوف أى Line من هداول ؟؟

Clarithromycin Based Concomitant □

□ Clarithromycin Based Sequential

□ Clarithromulycin Based Hybrid

□ Levofloxacin Based Sequential

.. □LOAD line

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

خلينا نشوف كل Line بجرعاته بالتفصيل ...

Clarithromycin Triple Therapy (14 day ttt) □

Clarithromycin 500 mg Twice Daily + Amoxicillin 1000mg Twice Daily + PPI (standard or Double Dose) Twice Daily

يباخذ المريض الـ Clarithro + Amoxicillin بعد الأكل

وال PPI قبل الأكل بنصف ساعه

لو المريض عنده حساسيه بنسلين بنبدل ال Amoxicillin ب

Metronidazol 500 Three time Daily

جرعات ال PPI ممكن نستخدم ال Standard او ال .. Double

□Standard Dose of PPI □

Omeprazol 20 mg Once Daily

Esomeprazol 20mg Once Daily

Rabeprazol 20 mg Once Daily

Lansoprazol 30 mg once Daily

Pantoprazol 40 mg once Daily

اما ال Double dose of PPI بنضاعف ال Standard Dose

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

□ Bismuth Quadruple Therapy (10-14 day ttt)

PPI standard dose twice daily + Bismuth Subsalicylate
300-524 mg four time daily + Tetracyclin 500 mg Four time daily + Metronidazol 500 mg three -four
... time daily or 250 mg four time Daily

لو ال Tetracyclin غير متوفر بنعطى Doxycyclin مرتين باليوم ..

لو المريض عنده حساسيه اسبرين بنستخدم ال Bismuth subcitrate بجرعه 300mg-120 بدلا عن ال Bismuth Subsalicylate

ال Bismuth subcitrate بيتاخذ قبل الاكل بنصف ساعه

Administer 30 minutes prior to three main meals and 2 hours after the last meal of the day (four times daily regimen)

Bismuth Subsalicylate : Shake liquids well prior to use. Chew tablets thoroughly or allow to dissolve in the mouth before swallowing. Nonchewable tablets should be swallowed whole with a full glass of water

□□□□□□□□□□□□□□□□

□ Levofloxacin Triple therapy (10-14 day)

PPI standard Dose Twice daily + levofloxacin 500 mg once daily + Amoxicillin 1000mg Twice daily ...

□□□□□□□□□□□□□□□□

□ Clarithromycin Based Concomitant (10-14 day)

PPI Standard dose twice daily + Clarithromycin 500 mg twice daily + Amoxicillin 1000mg twice Daily + Metronidazol or Tinidazol 500 mg Twice daily

□□□□□□□□□□□□□□□□

(□ Clarithromycin Based Sequential (10 day

أول 5 أيام بنعطي المريض

PPI Standard dose twice daily + Amoxicillin 1000mg twice Daily

وتانى 5 ايام بنعطى المريض

PPI Standard dose twice daily + Clarithromycin 500 mg twice daily + Metronidazol or Tinidazol 500 mg Twice Daily ..

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

(□ Clarithromulycin Based Hybrid (14 day totally

PPI Standard dose twice daily + Amoxicillin 1000mg twice Daily

PPI Standard dose twice daily + Clarithromycin 500 mg twice daily + Amoxicillin 1000mg Twice daily + Metronidazol or Tinidazol 500 mg Twice Daily

(□ Levofloxacin Based Sequential (10-14 day

PPI (standard or Double dose) Twice Daily + Amoxicillin 1000mg Twice Daily

PPI (Standard or double dose) twice daily + Amoxicillin 1000mg Twice daily + levofloxacin 500 mg once daily + metronidazol or tinidazol 500 mg twice Daily

□LOAD line

Levofloxacin 250 mg Once daily + PPI Double dose daily +Metronidazol or tinidazol 250-500 Twice Daily
+ Doxycyclin 100 mg daily

هيك بنكون خلصنا ال ttt of H pylori PUD وشفنا جرعات كل ال Regimen

البوست القادم ان شاء الله رح نشوف كيف بنتأكد من ال H pylori Eradication وكيف نتعامل مع ال

persistent *Helicobacter pylori* infection

ومين المريض اللى بيحتاج يمشى ع Maintenance PPI

#لعلی أفیدك ؟

First-line therapies for *H. pylori* infection

Regimen	Drugs (doses)	Dosing frequency	Duration (days)	FDA approval
Bismuth quadruple	PPI (standard dose [¶])	Twice daily	10 to 14 [◇]	No [§]
	Bismuth subcitrate (120 to 300 mg [not available in US] or 420 mg [available in North America and elsewhere as part of Pylera combination pill]) ^[1] or Bismuth subsalicylate (300 or 524 mg) ^[1]	Four times daily		
	Tetracycline (500 mg)	Four times daily		
	Metronidazole (250 to 500 mg)	Four times daily (250 mg)		
		Three to four times daily (500 mg)		

Clarithromycin triple*	PPI (standard ¶ or double the standard dose)	Twice daily	14	Yes ^Δ
	Clarithromycin (500 mg)	Twice daily		
	Amoxicillin (1 gram) or Metronidazole (500 mg)	Twice daily (amoxicillin) Three times daily (metronidazole)		
Clarithromycin-based concomitant*	PPI (standard dose ¶)	Twice daily	10 to 14	No
	Clarithromycin (500 mg)	Twice daily		
	Amoxicillin (1 gram)	Twice daily		
	Metronidazole or tinidazole (500 mg)	Twice daily		
Clarithromycin-based sequential ¥*	PPI (standard dose ¶) plus amoxicillin (1 gram) for 5 days followed by:	Twice daily	10 (total)	No
	PPI, clarithromycin (500 mg) plus either metronidazole or tinidazole (500 mg) for an additional 5 days	Twice daily		

Clarithromycin-based hybrid‡*	PPI (standard dose¶) plus amoxicillin (1 gram) for 7 days followed by:	Twice daily	14 (total)	No
	PPI, amoxicillin, clarithromycin (500 mg), plus either metronidazole or tinidazole (500 mg) for an additional 7 days	Twice daily		

FDA: United States Food and Drug Administration; PPI: proton pump inhibitor.

* In patients with risk factors for macrolide resistance, clarithromycin-based therapy should be avoided.

¶ Standard doses of orally administered proton pump inhibitors include: Lansoprazole 30 mg daily, omeprazole 20 mg daily, pantoprazole 40 mg daily, rabeprazole 20 mg daily, or esomeprazole 20 mg daily.

Δ Several PPI, clarithromycin, and amoxicillin combinations have achieved FDA approval. PPI, clarithromycin, and metronidazole is not an FDA-approved treatment regimen.

◊ 14 days is recommended. Refer to UpToDate topic on treatment for *H. pylori* infection.

§ PPI, bismuth, tetracycline, and metronidazole prescribed separately is not an FDA-approved treatment regimen. However, Pylera (a fixed-dose capsule containing bismuth subcitrate, tetracycline, and metronidazole) combined with a PPI for 10 days, and Helidac (a copackaged product containing bismuth subsalicylate, tetracycline, and metronidazole) combined with a PPI for 14 days, are FDA-approved treatment regimens. For additional information, refer to the Lexicomp drug monographs included within UpToDate.

¥ Some North American guidelines do not support the use of sequential therapy.

‡ Hybrid therapy has not been universally endorsed as an option for first-line therapy.

Salvage therapies for *H. pylori* infection

Regimen	Drugs (doses)*	Dosing frequency	Duration (days)
Bismuth quadruple	PPI (standard dose [¶])	Twice daily	14
	Bismuth subcitrate (120 to 300 mg [not available in US] or 420 mg [available in North America and elsewhere as part of Pylera combination pill]) ^[1] or Bismuth subsalicylate (300 or 524 mg) ^[1]	Four times daily	
	Tetracycline (500 mg)	Four times daily	
	Metronidazole (500 mg)	Three to four times daily	

Levofloxacin triple	PPI (high dose or high potency [¶])	Twice daily	14
	Levofloxacin (500 mg)	Once daily	
	Amoxicillin (750 mg)	Three times daily	
Clarithromycin quadruple ^[2]	PPI (standard dose [¶])	Twice daily	14
	Clarithromycin (500 mg)	Twice daily	
	Bismuth subsalicylate (300 or 524 mg) ^[1]	Four times daily	
	Tetracycline (500 mg)	Four times daily	
Rifabutin triple [◇]	PPI (high dose or high potency [¶])	Twice daily	14
	Rifabutin (300 mg)	Once daily	
	Amoxicillin (750 mg)	Three times daily	
Rifabutin triple [◇] (commercially available combination capsules)	Four (4) omeprazole-amoxicillin-rifabutin combination capsules (each capsule contains 10/250/12.5 mg)	Three times daily	14
High-dose dual	PPI (high dose [¶])	Three to four times daily	14
	Amoxicillin (1 gram three times daily or 750 mg four times daily)	Three to four times daily	

اجانا مريض بيعاني من Peptic ulcer disease وعملنا له تبيست من التيسطات اللي شرحناها سابقا وتبين انه عنده H- Pylori وبدأنا له العلاج ع أحد ال Regimen اللي شرحناها بالبوست السابق ..

بعد العلاج لازم نعمل Confermation لل .. Eradication

□ In patients treated for H. pylori, eradication of infection should be confirmed four or more weeks after the completion of therapy

□ The choice of test depends on the need for an upper endoscopy (eg, follow-up of bleeding peptic ulcer)

المريض اللي ما بيحتاج Endoscopy بنعمله Stool Antifigen test او ال Urea breath test ..

اما لو المريض عنده Indication لل Endoscopy فبنعمله Endoscopy

□ A repeat upper endoscopy is indicated in patients with any one of the following :

- Persistent symptoms or recurrent symptoms after discontinuation of PPI therapy
- Complicated ulcer (bleeding) with evidence of ongoing bleeding
- Giant gastric ulcer (>2 cm)
- Ulcer with features of malignancy at index endoscopy
- Gastric ulcer that was not biopsied or inadequately sampled on the index upper endoscopy (for adequate sampling we suggest 4 biopsies obtained from four quadrants of the ulcer and additional biopsies of the edges with jumbo forceps if there are endoscopic features of a malignant gastric ulcer)
- Gastric ulcers in a patient with risk factors for gastric cancer
- Gastric ulcer of unclear etiology

□□□□□□□□□□□□□□□□

بعد ال Eradication confirmation عنا احتماليين

□ اما المريض treated

او المريض □ Failed to ttt

□□□□□□□□□□□□□□□□

20% من المرضى بيصير عندهم Ttt fauler ويتضل ال H-Pylori ..

ومن أشهر العوامل اللي بتسبب ال .. ttt fauler

1□ poor pateint compliance

2□ Antibiotic Resistance ..

3□ Prior use of macrolide antibiotics, and levofloxacin increases the risk of H. pylori resistance to

these antibiotics

□Note : Resistance rates to amoxicillin, tetracycline, and rifabutin are low (<5 percent),and these can be considered for subsequent therapies in refractory H. pyloriInfection

4 Inadequate acid suppression is also associated with H. pylori eradication failure

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

طبيب كيف نتعامل مع المريض اللي عنده
persistent H. pylori infection

1❏ اول شی بنشوف شو ال Regimen اللي مشى عليه المريض بالأول

Antibiotics included in the initial regimen should generally be avoided

2؟ وشو ال Antibiotics اللي اخدها من قبل

Antibiotic ... 3وهل عنده حساسيه من اي نوع من ال

4؟ لو المريض مشى ع Regimen 2 والأتين فشلو

Culture **فینعمله**

Culture with antibiotic sensitivity testing should be performed to guide antibiotic treatment in patients who have failed two prior treatment regimens. Compliance

5️⃣ بنشوف ال Patient Adherence

6□We reserve the use of rifabutin-containing regimens for patients with ≥ 3 previous antibiotic failures. However, other experts have suggested its use as a second-line agent

7 The impact of metronidazole resistance can be overcome by increasing the dose (1.5 to 2 g daily in divided doses), duration, or frequency of administration of metronidazole

8 The use of high-dose PPIs (double the standard dose), use of more potent PPIs and those less dependent on metabolism by CYP2C19 (eg, esomeprazole or rabeprazole), or potassium-competitive acid blockers where available, can lower intragastric acidity in patients with refractory *H. pylori* infection

□□□□□□□□□□□□□□□□

:Salvage regimens in patients who have failed initial antibiotic therapy include

(ملخصين ب Algorithm مرفق بالصور)

14 لو المريض مشي ع ال Clarithromycin Regimen ك first line و فشل العلاج

ف ساخذ

Bismuth quadruple therapy As Salvage therapy

29. Bismuth quadruple therapy vs Clarithromycin triple therapy اخذ المبيض

Levofloxacin-based therapy as Salvage therapy□

□Other levofloxacin-based quadruple therapy regimens that have been used as salvage therapy include

PBLA (PPI, bismuth, levofloxacin, amoxicillin),

PBLT (PPI, bismuth, levofloxacin, tetracycline),

and PBLM (PPI, bismuth,levofloxacin, metronidazole) 3□ High-dose dual therapy - High-dose dual therapy with amoxicillin (at least 2g divided three or four times per day to avoid low trough levels) and protonpump inhibitor (PPI) for 14 days is a salvage treatment option, particularly inpatients in whom dual metronidazole/clarithromycin resistance or levofloxacin resistance is suspected

4□Rifabutin triple therapy - The rifabutin-based triple regimen consists of Rifabutin-based triple therapy is expensive and can cause reversible myelotoxicity. It also has the pote .rifabutin, amoxicillin, and a PPI twice daily for 14 days

ال Rifabutin regimen عادة يستخدم لو المريض مشى ع 3 Regimen او أكثر وفشلن

5□Clarithromycin-based therapy -Clarithromycin-based therapy (eg, PPI, bismuth, clarithromycin, tetracycline), can be used as a salvage regimen inpatients with no risk factors for macrolide resistance (no prior macrolideexposure and local clarithromycin resistance (known to be <15 percent

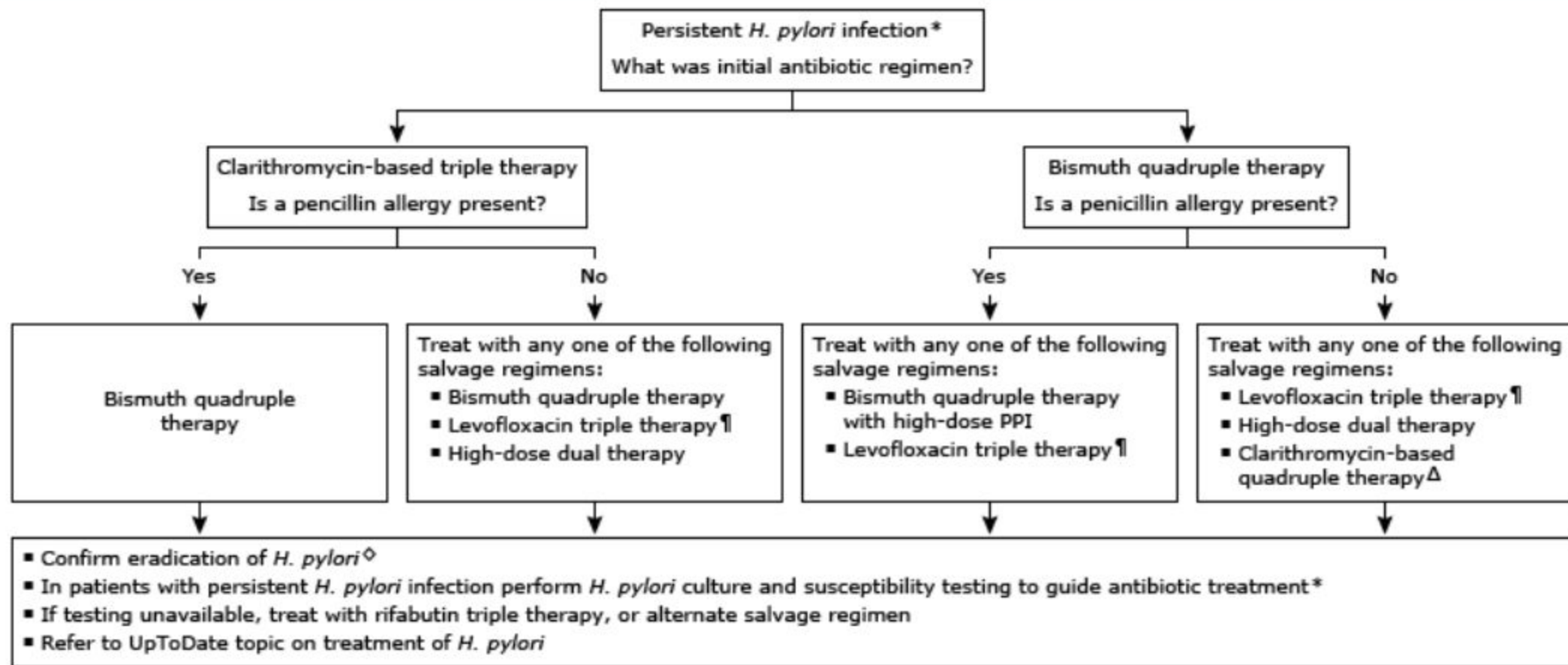
وهيك بنكون خلصنا ال H-Pylori Induce Ulcer بكل تفاصيلها

البوست القادم رح نشوف ان شاء الله ال

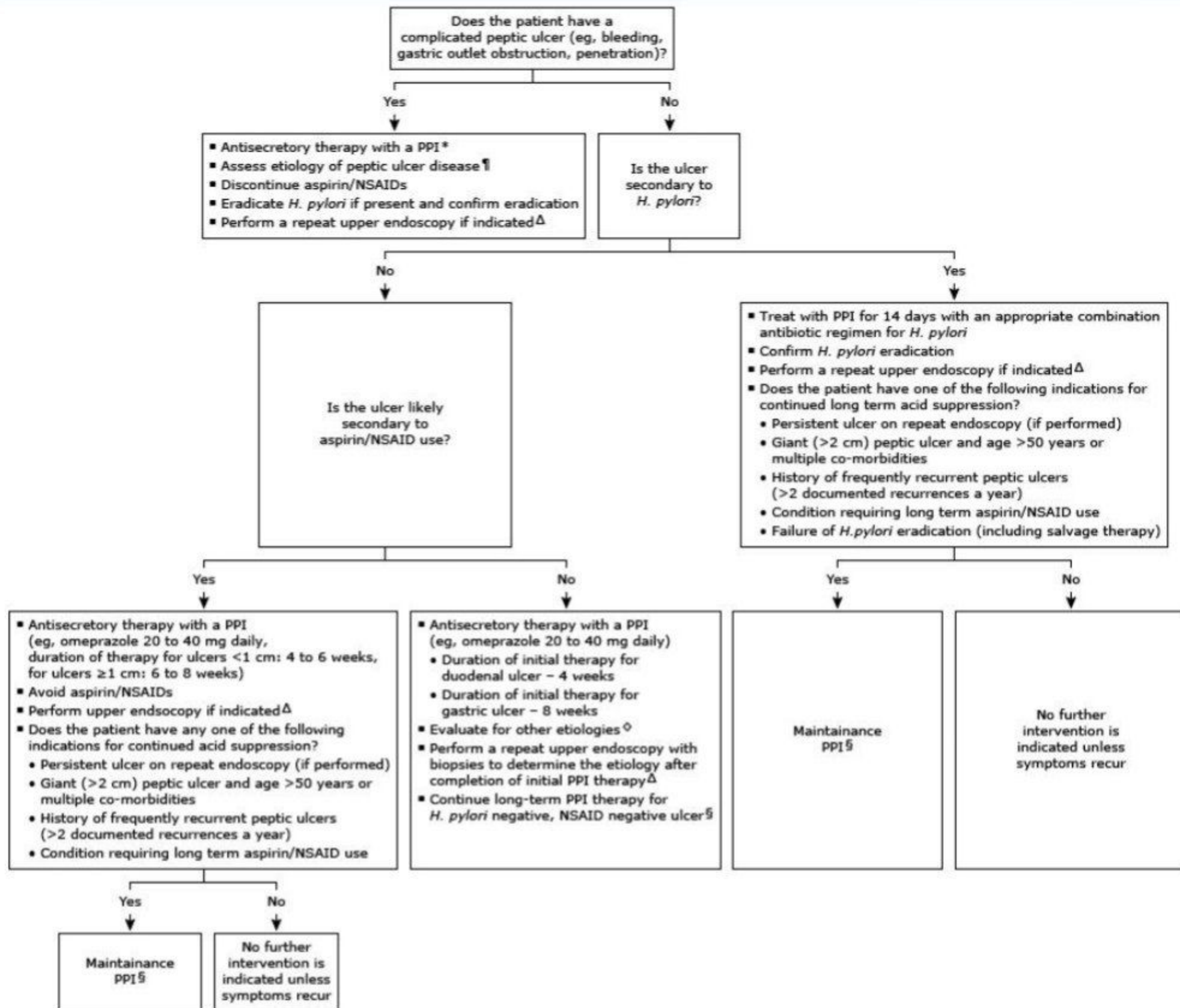
NSAIDs Induce Ulcer Prevention & ttt

#لعلي_أفيدك ٤

Approach to antibiotic treatment in patients with persistent *Helicobacter pylori* infection



Overview of the management of the adult patient with peptic ulcer disease



يسعد مساكم ؟

GIT#

#بوست 13

NSAIDs_Induce_Ulcer#

مریض Arthritis و ماشي ع Ibuprofen بعد 4 شهور من اخذه لل Ibuprofen (NSAIDs) دخل ب Peptic Ulcer ...
او مریض عنده CVS event و ماشي ع long life Low Dose aspirin و بسبب الاسبرين دخل ب Ulcer ...
كيف بنعالج ال NSAIDs Induce Ulcer ؟؟؟

أي مریض ماشي ع NSAIDs و دخل ب Peptic Ulcer بنعالجه كالتالي :
1□ Stop the NSAIDs

2□ Treat pateint with PPI

3□ Test for H-Pylori

يبقى اول شي بنوقف ال NSAIDs

طیب فرضا كان المریض ماشي ع Low Dose Aspirin و لازم يكمل ع الاسبرين لانه عنده High CVS Risk متى بنرجعه ع
الاسبرين؟

We recommends low-dose aspirin, if still indicated, be restarted approximately five to seven days
.after initiating therapy with a proton pump inhibitor
وبعدها هيمشي ع Maintenance Dose of PPI مع الاسبرين

تاني شي بنعطي المریض .. PPI

Treatment with a PPI is generally continued for four to eight weeks depending on the ulcer size and
.the severity of the initial clinical presentation

عادة بيمشي المریض ع Omeprazol بجرعه 20-40mg يوميا

او ما يعادلها من ال □□ Other PPI

Dexlansoprazole 30 to 60 mg

Esomeprazole 20 to 40 mg

Lansoprazole 30 mg

Pantoprazole 40 mg

Rabeprazole 20mg

□لو كانت ال Ulcer حجمها أقل من 1cm بیستمر المریض ع PPI لمدة 4-6 اسابيع ..

□ولو كان حجم ال Ulcer اكبر او يساوي 1cm بیستمر المریض ع PPI لمدة 6-8 اسابيع

Endoscopic follow-up to assess ulcer healing is usually unnecessary for duodenal ulcers, but should□
be performed to assess healing of gastric ulcers if there had been any concern that malignancy had
.not been excluded at the initial endoscopy

تالت شي بنعمل للمریض H-Pylori test ولو كان Positive بنعالجه لل H-Pylori زي ما شرحناه سابقا بالتفصيل ...

#لعلی أفیدك؟



Stomach

جطعة بروفين ثانية
و أنثقب طال عمرك

Recommendations for PPI doses in active therapy of uncomplicated gastroduodenal ulcers*

Drug	Dose (adult)
Dexlansoprazole	30 to 60 mg
Esomeprazole	20 to 40 mg
Lansoprazole	30 mg
Omeprazole	20 to 40 mg
Pantoprazole	40 mg
Rabeprazole	20 mg
All administered by mouth daily before breakfast	

PPI: proton pump inhibitor.

* As a general rule, active duodenal ulcers should be treated for four weeks and gastric ulcers for eight weeks.

In summary, if an NSAID and low-dose patients, aspirin must be resumed in high GI risk celecoxib plus a PPI may be preferred over naproxen plus a PPI. However, in patients at lower GI risk, celecoxib plus a PPI may not have an advantage over nonselective NSAIDs plus a PPI.

In summary, patients who require low-dose aspirin for cardiovascular prophylaxis and have had a bleeding ulcer while taking low-dose aspirin should be treated with a PPI (rather than an H₂-blocker), along with H. pylori eradication if they test positive for H. pylori.

*Simply substituting a
COX-2 inhibitor for the
prior nonselective NSAID in
patients with
NSAID-related ulcer
disease and ulcer
complications should not
be chosen over PPI
maintenance therapy*

متى يكون المريض Low Risk ؟

لو كان ما عنده أي Risk Factor

يبقى أول شيء عملنا تيست لل H- Pylori وبعد هيك شفنا له ال GI Risk هل هو High ولا Moderate ولا Low

بيضل اخر شي نشوفله ال Cardio Risk ..

ببساطه ؟ لو المريض ماشي ع Low Dose aspirin يعتبره

High CV Risk

❓ لو المريض مش ماشي ع Low Dose Aspirin بعتره

.. Low CV Risk

[illegible]

يبقى عنا 6 حالات ممكن يجينا فيها المريض الى بده ياخذ : NSAIDs

□ Low CV Risk , Low GI Risk

وبهالاله بينعطى NSAIDs بدون PPI

بس بنراعى انه نعطي أقل ال NSAIDs تأثيرا ع المعده

زبي ال Ibuprofen و ال Diclofinac وال Nabumetone

وَنَبْعَدُ عَنْ الِ KETROLAC وَالِ INDOMETHACIN وَالِ PIROXICAM

□ Low CV Risk ,Moderate GI Risk

بہلحالہ بنعطی PPI مع ال NSAIDs

□ Low CV Risk , High GI Risk

هنا بنعطى Selective COX2 عشان المريض High GI

وينضيف ال PPI مع ال Selective COX

□High CV Risk ,Low GI Risk

طالما في High CV فاکتر NSAIDs أمانا هو ال Naproxene

Naproxene + PPI فبنعطى

□High CV Risk ,Moderate GI Risk

بردو حياخذ Naproxene مع .. PPI

□ High CV Risk , High GI Risk

لو كان المريض High GI & High CV ومحتاج علاج لل Arthritis مثلا

Step Approach بالعلاج حسب اتفاق ال Cardiology Society وال Gastroenterology Society

1. Consider using acetaminophen, aspirin, tramadol, or short term narcotics As Afirst Choise ☐☐
2. Nonacetylated salicylates can be considered next as a secondary Choise ☐☐
3. Non-COX-2-selective NSAIDS can be used next, followed by NSAIDs with some COX-2 activity(Meloxicam) . Use the lowest dose possible to control symptoms. ☐☐
4. The COX-2 inhibitors should be reserved as last line. In patients at increased risk of thromboembolic events, coadministration with aspirin and a PPI may be considered.
- ...5. Routinely monitor BP, renal function, and signs of edema bleeding

نختم البوست بمعلومه لطيفه لو مريض حيمشي ع Ibuprofen وماشي ع Low Dose Aspirin بننصحه يفصل بينهم

لانه الIbuprofen يقلل ال antiplatelet effects of the aspirin.

Prevention of NSAIDs-related ulcer complications

Summary of recommendations for prevention of NSAIDs-related ulcer complications

	Gastrointestinal risk		
	Low	Moderate	High
Low CV risk	NSAIDs alone (the least ulcerogenic NSAIDs at the lowest effective dose)	NSAIDs + PPI/misoprostol	Alternative therapy if possible or COX-2 inhibitor + PPI/misoprostol
High CV risk (low-dose aspirin required)	Naproxen + PPI/misoprostol	Naproxen + PPI/misoprostol	Avoid NSAIDs or COX-2 inhibitors. Use alternative therapy

Patients at increased risk for NSAIDs GI toxicity

<i>High risk</i>	1. History of complicated ulcer especially recent 2. Multiple (> 2 risk factors)
<i>Moderate risk (1 – 2 risk factors)</i>	1. Age > 65 years 2. High dose NSAID therapy 3. Previous history of uncomplicated ulcer 4. Concurrent use of aspirin 5. Concurrent use of corticosteroids 6. Concurrent use of anticoagulants
<i>Low risk</i>	No risk factors

HP is independent & additive risk factor & addressed separately

ACG guidelines for prevention of NSAID-related ulcer complications .
Am J Gastroenterol 2009 ; 104: 728 – 738.

Upper GI Bleeding..

.. UGIB: Bleeding derived from a source proximal to the Ligament of Treitz

ال UGIB هو نزيف من ال Esophagus او ال Stomach وال

First part of Duodenum

مريض ال UGIB ممكن يجي بشكل من الاشكال التاليه :

hematemesis □

المريض جاي ب .. bloody Vomiting

□ □ Coffee ground vomiting

بيكون ال Vomiting زي رغوة القهوة ..

Melena : Black Stool□

ال blood وهو نازل من ال Upper GI ييصيرله أكسده وبيتحول لونه

.. Black ل

في حالات قليله من ال UGIB Sever المريض بيكون جاي ب

.. Hematochezia : Red Blood in Stool

اما اغلب حالات ال Hematochezia بتكون Lower GI bleeding

زي حالات ال hemorrhoid

.....

شو الأسباب اللي بتدخل المريض ب UGIB □□ (مرفقين بالصور بالتفصيل الممل) ...

The most common causes of UGIB include the following (in approximate descending order of frequency)

- Gastric and/or duodenal ulcers characterized by Upper abdominal pain

في عنا كذا Risk لحدوث Bleeding من ال PUD

زي ال Chronic Use of NSAIDs و H-Pylori وال Stress

والمقصود من ال Stress هو اللي بيكون في الحالات اللي Critical ill زي حالات ال ICU وال Respiratory Failure وال Coagulopathy ...

- Severe or erosive gastritis/duodenitis

- Severe or erosive esophagitis

characterized by Odynophagia, gastroesophageal reflux, dysphagia

من اشهر الادويه اللي بتزود ال Risk لل Esophagitis bleeding هي ال NSAIDs ,,Tetracyclin ,, bisphosphanate ,, candidia & Herpes simplex virus

- Esophagogastric varices

- Portal hypertensive gastropathy

- Angiodysplasia (also known as vascular ectasia)

- Mallory-Weiss syndrome

longitudinal mucosal lacerations (intramural dissections) in the distal esophagus and proximal stomach) that are usually associated with forceful retching characterized by Emesis, retching, or coughing prior to hematemesis

- Mass lesions (polyps/cancers)

- No lesion identified (10 to 15 percent of patients)

Other less common causes of UGIB include:

- Dieulafoy's lesion

- Gastric antral vascular ectasia

- Hemobilia

- Hemosuccus pancreaticus

- Aortoenteric fistula

- Cameron lesions

- Ectopic varices

- Iatrogenic bleeding after endoscopic interventions

طبيب اجانا مريض UGIB كيف بنعمله Evaluation □ حنشوفه البوست القادم ان شاء الله ..
#لعللي أفيدك ٤

GI
Bleedin



Disorders that cause upper GI bleeding in adults

Cause	Bleeding manifestations	Associated signs and symptoms	Associated conditions or risk factors	Endoscopic findings*
Ulcerative or erosive				
Duodenal and/or gastric ulcer	Hematemesis Melena Hematochezia (indicates brisk bleeding) Occult blood loss	Upper abdominal pain Pain associated with eating (worse when eating suggests gastric ulcer, improvement with eating suggests duodenal ulcer) Dyspepsia ¶	Infections: ▪ <i>Helicobacter pylori</i> ▪ CMV ▪ HSV NSAIDs Stress ulcer (eg, in patients who are critically ill) Excess gastric acid production (ZES) Idiopathic	Ulcer with smooth, regular, rounded edges; ulcer base often filled with exudate Examination of the ulcer may reveal: ▪ Active bleeding or oozing ▪ Nonbleeding visible vessel ▪ Adherent clot ▪ Flat pigmented spot ▪ Clean ulcer base
Esophagitis	Hematemesis Melena Occult blood loss	Dysphagia/odynophagia Retrosternal pain Food impaction	Gastroesophageal reflux disease Medications that may cause "pill esophagitis": ▪ Erythromycin ▪ Tetracycline ▪ Doxycycline ▪ Clindamycin ▪ Trimethoprim-sulfamethoxazole ▪ NSAIDs ▪ Oral bisphosphonates ▪ Potassium chloride ▪ Quinidine ▪ Iron supplements Infections: ▪ HSV ▪ CMV ▪ <i>Candida albicans</i> ▪ HIV	Erythema, mucosal breaks/erosions, exudative lesions, superficial or deep ulcers, stenosis, scarring Peptic esophagitis: The ulcerations are usually irregularly shaped or linear, multiple, and distal; may be accompanied by Barrett's esophagus Pill-induced: Ulcerations are usually singular and deep, occurring at points of stasis (especially near the carina), with sparing of the distal esophagus Infectious esophagitis: ▪ HSV – Discrete, superficial ulcers, with well-demarcated borders that tend to involve the upper or mid-esophagus; vesicles may be seen ▪ CMV – Ulcers range from small and shallow to large (>1 cm) and deep; most patients have multiple lesions ▪ <i>Candida</i> – Diffuse white plaques ▪ HIV – Tends to involve the mid to distal esophagus, ulcers may be shallow or deep, and may be large

Gastritis/gastropathy Duodenitis/duodenopathy	Occult blood loss Hematemesis Melena	Dyspepsia ¶	Risk factors: ▪ <i>H. pylori</i> ▪ NSAIDs ▪ Excessive alcohol consumption ▪ Radiation injury ▪ Physiologic stress ▪ Weight loss surgery ▪ Bile reflux Risk factors for bleeding: ▪ Anticoagulant use	Erythematous mucosa Superficial erosions Nodularity Diffuse oozing
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Complications of portal hypertension

Esophagogastric varices	Hematemesis Melena Hematochezia (indicates brisk bleeding)	Stigmata of chronic liver disease Δ , in particular, signs of portal hypertension (splenomegaly, ascites, thrombocytopenia)	Portal hypertension from: ▪ Cirrhosis ▪ Portal vein thrombosis ▪ Noncirrhotic portal hypertension	Vascular structures that protrude into the esophageal and/or gastric lumen Findings associated with an increased risk of hemorrhage: ▪ Longitudinal red streaks on the varices (red wale marks) ▪ Cherry-colored spots that are flat and overlie varices ▪ Raised, discrete red spots (hematocystic spots) Esophageal varices: ▪ F1: Small, straight varices ▪ F2: Enlarged, tortuous varices that occupy less than one-third of the lumen ▪ F3: Large, coil-shaped varices that occupy more than one-third of the lumen Gastric varices: ▪ GOV1: Gastroesophageal varices along the lesser curvature of the stomach ▪ GOV2: Gastroesophageal varices along the greater curvature of the stomach ▪ IGV1: Isolated gastric varices in the fundus ▪ IGV2: Isolated gastric varices at other loci in the stomach
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Ectopic varices	Hematemesis Melena Hematochezia (indicates brisk bleeding)	Stigmata of chronic liver disease Δ , in particular, signs of portal hypertension (splenomegaly, ascites, thrombocytopenia)	Portal hypertension from: ▪ Cirrhosis ▪ Portal vein thrombosis ▪ Noncirrhotic portal hypertension	Vascular structures that protrude into areas of the gastrointestinal tract lumen other than the esophagus or stomach (eg, small bowel, rectum)
Portal hypertensive gastropathy	Occult blood loss Hematemesis Melena Hematochezia (indicates brisk bleeding)	Stigmata of chronic liver disease Δ , in particular, signs of portal hypertension (splenomegaly, ascites, thrombocytopenia)	Portal hypertension from: ▪ Cirrhosis ▪ Portal vein thrombosis ▪ Noncirrhotic portal hypertension	Mosaic-like pattern that gives the gastric mucosa a "snakeskin" appearance Mucosal changes are usually most evident in the fundus and body; in more severe cases, oozing, bleeding, subepithelial hemorrhages, and increased vascularity similar to angiomas are evident, often involving the gastric fundus, gastric body, and antrum

Vascular lesions

Angiodysplasia	Hematemesis Melena Hematochezia Occult blood loss May have brisk bleeding	Cutaneous angiodysplasia in patients with hereditary hemorrhagic telangiectasia (Osler-Weber-Rendu syndrome)	End-stage kidney disease Aortic stenosis Left ventricular assist device Hereditary hemorrhagic telangiectasia von Willebrand disease Radiation therapy Idiopathic	Small (5 to 10 mm), flat, cherry-red lesions, often with a fern-like pattern of arborizing, ectatic blood vessels radiating from a central vessel
Dieulafoy's lesion	Hematemesis Melena Hematochezia (indicates brisk bleeding; bleeding is often particularly brisk)		Etiology unknown Bleeding may be associated with NSAIDs, cardiovascular disease, hypertension, chronic kidney disease, diabetes, or alcohol abuse	Usually located in the proximal stomach (within 6 cm of the esophagogastric junction) along the lesser curvature (although can be found anywhere in the GI tract) May have active arterial spurting from the mucosa without an associated ulcer or mass If the bleeding has stopped, there may be a raised nipple or visible vessel without an associated ulcer Endoscopic ultrasound may help confirm the diagnosis
Gastric antral vascular ectasia (GAVE)	Hematemesis Melena Hematochezia (indicates brisk bleeding) Occult blood loss	In patients with cirrhosis, there may be stigmata of chronic liver disease Δ , in particular, signs of portal hypertension (splenomegaly, ascites, thrombocytopenia)	Idiopathic Cirrhosis with portal hypertension Kidney disease/transplantation Diabetes mellitus Systemic sclerosis (scleroderma) Bone marrow transplantation	Longitudinal rows of flat, reddish stripes radiating from the pylorus into the antrum that resemble the stripes on a watermelon

Blue rubber bleb nevus syndrome (Bean syndrome)	Hematemesis Melena Hematochezia (indicates brisk bleeding) Occult blood loss	Venous malformations and hemangiomas of any organ, including: ▪ Skin ▪ Central nervous system ▪ Liver ▪ Muscles ▪ Lymphatics Intussusception		Blue or purple nodules, round or multilobular; may occur anywhere in the gastrointestinal tract
Traumatic or iatrogenic				
Mallory-Weiss syndrome	Hematemesis following an increase in intra-abdominal pressure Melena Hematochezia (indicates brisk bleeding)	Epigastric pain Back pain	Vomiting/retching (often related to alcohol consumption) Straining at stool or lifting Coughing Seizures Blunt abdominal trauma Hiatal hernia may increase the risk of developing a tear	Tear in the esophagogastric junction Usually singular and longitudinal, but may be multiple Visualization may require retroflexion of the gastroscope in the cardia of the stomach The tear may be covered by an adherent clot
Foreign body ingestion	Hematemesis Melena Hematochezia (indicates brisk bleeding) Occult blood loss	Dysphagia Odynophagia Neck or abdominal pain Choking Hypersalivation Retrosternal fullness	Psychiatric disorders Altered mental status (toxin induced, dementia, etc.) Loose dentures	Visualization of the foreign body endoscopically (plain radiographs of the neck, chest, and abdomen may reveal a radiopaque foreign body or signs of perforation)
Post-surgical anastomotic bleeding ("marginal ulcers")	Occult blood loss Hematemesis Melena Hematochezia (indicates brisk bleeding)	Epigastric pain Nausea	Billroth II surgery Gastric bypass surgery NSAID use <i>H. pylori</i> infection Smoking	Ulceration/friable mucosa at an anastomotic site
Post-polypectomy/endoscopic resection/endoscopic sphincterotomy	Hematemesis Melena Hematochezia (indicates brisk bleeding)	Past history of instrumentation (may be as long as three weeks prior to presentation)	Large lesions	Bleeding at resection site; ulceration at the site may be seen
Cameron lesions	Occult blood loss Hematemesis Melena Hematochezia (indicates brisk bleeding)		Hiatal hernia Reflux esophagitis	Linear ulcers or erosions on the mucosal folds of a hiatal hernia at the diaphragmatic impression
Aortoenteric fistula	Hematemesis Melena Hematochezia (indicates brisk bleeding) May have a "herald" bleed followed by massive bleeding	Back pain Fever Signs of sepsis Pulsatile abdominal mass Abdominal bruit	Infectious aortitis (syphilis, tuberculosis) Prosthetic aortic graft Atherosclerotic aortic aneurysm Penetrating ulcers Tumor invasion Trauma Radiation injury Foreign body perforation	Endoscopy is important, primarily to exclude other, more common causes of acute upper GI bleeding Endoscopy with an enteroscope or side-viewing duodenoscope may reveal a graft, an ulcer or erosion at the site of an adherent clot, or an extrinsic pulsatile mass in the distal duodenum or esophagus

Tumors				
Upper GI tumors	Hematemesis Melena Hematochezia (indicates brisk bleeding) Occult blood loss	Weight loss Anorexia Nausea/vomiting Early satiety Epigastric pain Dysphagia (for tumors in the esophagus or proximal stomach) Gastric outlet obstruction Palpable mass Paraneoplastic manifestations: - Diffuse seborrheic keratoses - Acanthosis nigricans - Membranous nephropathy - Coagulopathy	Virtually any tumor type may bleed Benign tumors: - Leiomyoma - Lipoma - Polyp (hyperplastic, adenomatous, hamartomatous, inflammatory) Malignant tumors: - Adenocarcinoma - GI stromal tumors - Lymphoma - Kaposi sarcoma - Carcinoid - Melanoma - Metastatic tumors	Ulcerated mass in the esophagus, stomach, or duodenum In gastric malignancies, the folds surrounding the ulcer crater may be nodular, clubbed, fused, or stop short of the ulcer margin; the margins may be overhanging, irregular, or thickened Bleeding lymphoma may appear as an ulcerated mass or polypoid lesion or as a gastric ulcer
Miscellaneous				
Hemobilia	Hematemesis Melena Hematochezia (indicates brisk bleeding)	Biliary colic Jaundice (obstructive) Sepsis (biliary)	Past history of liver or biliary tract instrumentation and/or injury, including the following: - Liver biopsy - Cholecystectomy - Endoscopic biliary biopsies or stenting - TIPS placement - Angioembolization - Blunt or penetrating abdominal trauma - Gallstones - Cholecystitis - Hepatic or bile duct tumors - Intrahepatic stents - Hepatic artery aneurysms - Hepatic abscesses	Blood or clot emanating from the ampulla (a side-viewing duodenoscope may be required to visualize the ampulla) If a clot has formed in the bile duct, bleeding may not be appreciated until the clot is removed ERCP may reveal a filling defect in the bile duct
Hemosuccus pancreaticus	Hematemesis Melena Hematochezia (indicates brisk bleeding)	Abdominal pain Past evidence of symptoms/signs of pancreatitis Imaging evidence of pancreatitis (current or in the past) Elevated amylase and lipase (current or in the past)	Chronic pancreatitis Pancreatic pseudocysts Pancreatic tumors Pancreatic pseudoaneurysm Therapeutic endoscopy of the pancreas or pancreatic duct: - Pancreatic stone removal - Pancreatic duct sphincterotomy - Pseudocyst drainage - Pancreatic duct stenting	Blood or clot emanating from the ampulla (a side-viewing duodenoscope may be required to visualize the ampulla) Cross-sectional imaging or angiography is often required to confirm the diagnosis

CMV: cytomegalovirus; HSV: herpes simplex virus; ZES: Zollinger-Ellison syndrome; NSAID: nonsteroidal anti-inflammatory drug; HIV: human immunodeficiency virus; GI: gastrointestinal; TIPS: transjugular intrahepatic portosystemic shunt; ERCP: endoscopic retrograde cholangiopancreatography.

* If active bleeding or large amounts of residual blood are present, the characteristic endoscopic findings may be obscured.

¶ Postprandial fullness, early satiety, epigastric pain, or burning.

Δ Evidence of chronic liver disease includes jaundice, splenomegaly, ascites, thrombocytopenia, palmar erythema, spider angiomas, gynecomastia, testicular atrophy, and Dupuytren's contracture.

بدأنا البوست السابق بال UGIB

وعرفنا انه مريض ال UGIB ممكن يجي باحد الصور التالية :

Hematemesis (either red blood or coffee-ground emesis) OR Melena OR Hematochezia can occur —
... with massive upper GI bleeding

اليوم ان شاء الله رح نكمل مع ال [♀] INITIAL EVALUATION

Initial Evaluation of a patient with a suspected clinically significant acute upper GI bleed includes a history, physical examination, and laboratory tests.

History 1 :

من خلال ال Past History للمريض ، بنشوف شو السبب لل UGIB

لو كان المريض عنده Ulcer ف ع الاغلب السبب Ulcer Bleeding

لو كان مريض Liver Cirrhosis بيكون السبب ال Esophageal Varicose

لو كان مريض Malignancy فهو السبب

لو كان ماشي ع NSAIDs او Low dose aspirin فاحتمال يكونو هم السبب ..

بنسأل المريض على ال .. Medication History

[] Predispose to peptic ulcer formation, such as aspirin and other NSAIDs, including COX-2 inhibitors

[] Promote bleeding, such as antiplatelet agents (eg, clopidogrel) and anticoagulants (including the direct oral anticoagulants)

[] Drug Have been associated with GI bleeding, including selective serotonin reuptake inhibitors (SSRI), calcium channel blockers, and aldosterone antagonists

.....

2 [] Symptom assessment —

Symptoms that suggest the bleeding is severe include orthostatic dizziness, confusion, angina, severe palpitations, and cold/clammy extremities.

.....

Physical examination —
assessment of hemodynamic stability. Signs of hypovolemia include :

- Mild to moderate hypovolemia (less than 15 percent of blood volume lost) Resting tachycardia.
- Blood volume loss of at least 15 percent – Orthostatic hypotension (a decrease in the systolic blood pressure of more than 20 mmHg and/or an increase in heart rate of 20 beats per minute when moving from recumbency to standing).

[] Blood volume loss of at least 40 percent – Supine hypotension

.....

complete blood count, serum chemistries, liver tests, and coagulation studies. In addition, serial electrocardiograms and cardiac enzymes may be indicated in patients who are at risk for a myocardial infarction, such as older adults, patients with a history of coronary artery disease, or patients with symptoms such as chest pain or dyspnea

ال CBC بينعمل كل 4-6 hour حسب ال .. Bleeding Severity

The initial hemoglobin level in patients with acute upper GI bleeding may be at the patient's baseline because the patient is losing whole blood. With time (typically after 24 hours or more) the hemoglobin level will decline as the blood is diluted by the influx of extravascular fluid into the vascular space and by fluid administered during resuscitation.

It should be kept in mind that excessive volume administration can lead to a falsely low hemoglobin value. The initial hemoglobin level is monitored every two to eight hours, depending upon the severity of the bleed.

Patients with acute bleeding should have normocytic red blood cells. Microcytic red blood cells or iron deficiency anemia suggest chronic bleeding. Because blood is absorbed as it passes through the small bowel and patients may have decreased renal perfusion, patients with acute upper GI bleeding typically have an elevated blood urea nitrogen (BUN)-to-creatinine or urea-to-creatinine ratio.

Values >30:1 or >100:1, respectively, suggest upper GI bleeding as the cause. The higher the ratio, ... the more likely the bleeding is from an upper GI source

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البوست القادم رح نبليش بال Management of UGIB ان شاء الله

#لعللي أفيدك ؟

Clinical Indicator	Probability of Upper GI Source	Probability of Lower GI Source
Hematemesis	Almost certain	Rare
Melena	Probable	Possible
Hematochezia	Possible	Probable
Blood-streaked stool	Rare	Almost certain
Occult blood in stool	Possible	Possible

GI = gastrointestinal.

Assessment of hemorrhagic shock

As previously mentioned, patients who present in hemorrhagic shock have a mortality rate of up to 30%. Hemorrhage may be classified based on the amount of blood loss, as noted in the following table.[\[30\]](#)

	Class 1	Class 2	Class 3	Class 4
Blood Loss, mL	Up to 750	750-1500	1500-2000	>2000
Blood Loss, % blood volume	Up to 15	15-30	30-40	>40
Pulse Rate, bpm	< 100	>100	>120	>140
Blood Pressure	Normal	Normal	Decreased	Decreased

Respi ratory Rate	Normal or Increased	Decrease d	Decrease d	Decrease d
Urine Output, mL/h	>35	30-40	20-30	14-20
CNS/ Mental Status	Slightly anxious	Mildly anxious	Anxious, confused	Confused, lethargic
Fluid Rep lacement, 3-for-1 rule	Crystalloi d	Crystalloi d	Crystall oid and blood	Crystall oid and blood

bpm = beats per minute; CNS = central nervous system

Table 2. Estimated Fluid and Blood Losses in Shock

(High Risk to low Hemoglobin (As coronary Aretry Disease ,Ongoing Active bleeding

بـهـلـحـالـة بـنـعـطـيـه Blood transfusion وبنحافظ على ال Hb اعلى من 8

4? لو المريض دخل ب Active Ischemia بنحافظ ع ال Hb اكثر من 10

.....

Some Note □

□Because packed red blood cells do not contain coagulation factors or platelets, we give fresh frozen plasma and platelets after every four units of blood . However, more aggressive transfusion may be required for patients with severe, ongoing hemorrhage that is not likely to be controlled quickly, similar to management in trauma patients

□Transfusing patients with suspected variceal bleeding to a hemoglobin >10 g/dL (100 g/L) should be avoided.

□patients who had elective endotracheal intubation were more likely than patients who were not intubated to have adverse cardiopulmonary outcomes based on a composite outcome that included pneumonia, pulmonary edema, acute respiratory distress syndrome, and cardiac arrest

□we suggest that all admitted patients with the exception of low-risk patients receive electrocardiographic monitoring

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لو مريض ال UGIB كان Thrombocytopenia متى بنعطيه Platlet □?
عشان ينعمل للمريض Endoscopy لازم ال Platlet count تعدي ال 20.000

Limited data suggest that proceeding with upper endoscopy in patients with thrombocytopenia is generally safe though whether there is a lower limit below which endoscopy should be delayed is unclear

Our approach is to perform an upper endoscopy if the platelet count is >20,000/microL, though if the patient is suspected to have active bleeding, we attempt to raise the platelet count to >50,000/microL prior to endoscopy.

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Coagulopathy — Patients with a coagulopathy that is not due to cirrhosis and with a prolonged prothrombin time with INR >2.0 should generally be transfused with FFP.
We will perform upper endoscopy once the INR is <2.5

More rapid reversal of anticoagulation can be achieved if needed by the use of prothrombin complex concentrate infusions and is the preferred approach for patients with serious/life-threatening bleeding. In addition to prothrombin complex concentrate, low dose vitamin K should be considered for hemodynamically unstable patients who are taking a vitamin K antagonist A unit of FFP should also be given after every four units of packed red blood cells because packed red blood cells do not contain coagulation factors

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يبقى المـجـمـل ،اي مريض UGIB اول شي بوصله لل

Hemodynamic stability & General Support

بنبدأ ب crystalloid RResuscitation ٤٤

وبعض الحالات يحتاج Blood Transfusion ..

٤٤ حالات ال Thrombocytopenia قبل ال Endoscopy بنوصل ال Platlet ل 20.000

او 50.000 لو الحاله Active bleeding

البوست القادم ان شاء الله رح نشوف ال Step الثانيه بالعلاج وكيف حنعطي PPI وبأي جرعه ..

#لعلي_أفيدك ٤

وهلا بالخميس ٤٤

Initial management

- **Assess hemodynamic status**
- **Resuscitation**
 - IV fluids, blood products
- **Medications**
 - Presence/absence of anti-thrombotic therapy
 - PPI (IV route)
 - Prokinetic therapy
 - Octreotide (if any suspicion for portal hypertension, varices)



Triage

- **ICU level care**
 - Unstable vital signs
 - Multiple comorbidities
 - Need for endotracheal tube (ETT)
 - Ongoing massive bleeding
- **Medical/surgical floor**
 - Hemodynamically stable
 - No hematemesis
- **Outpatient management**
 - GBS 0–1

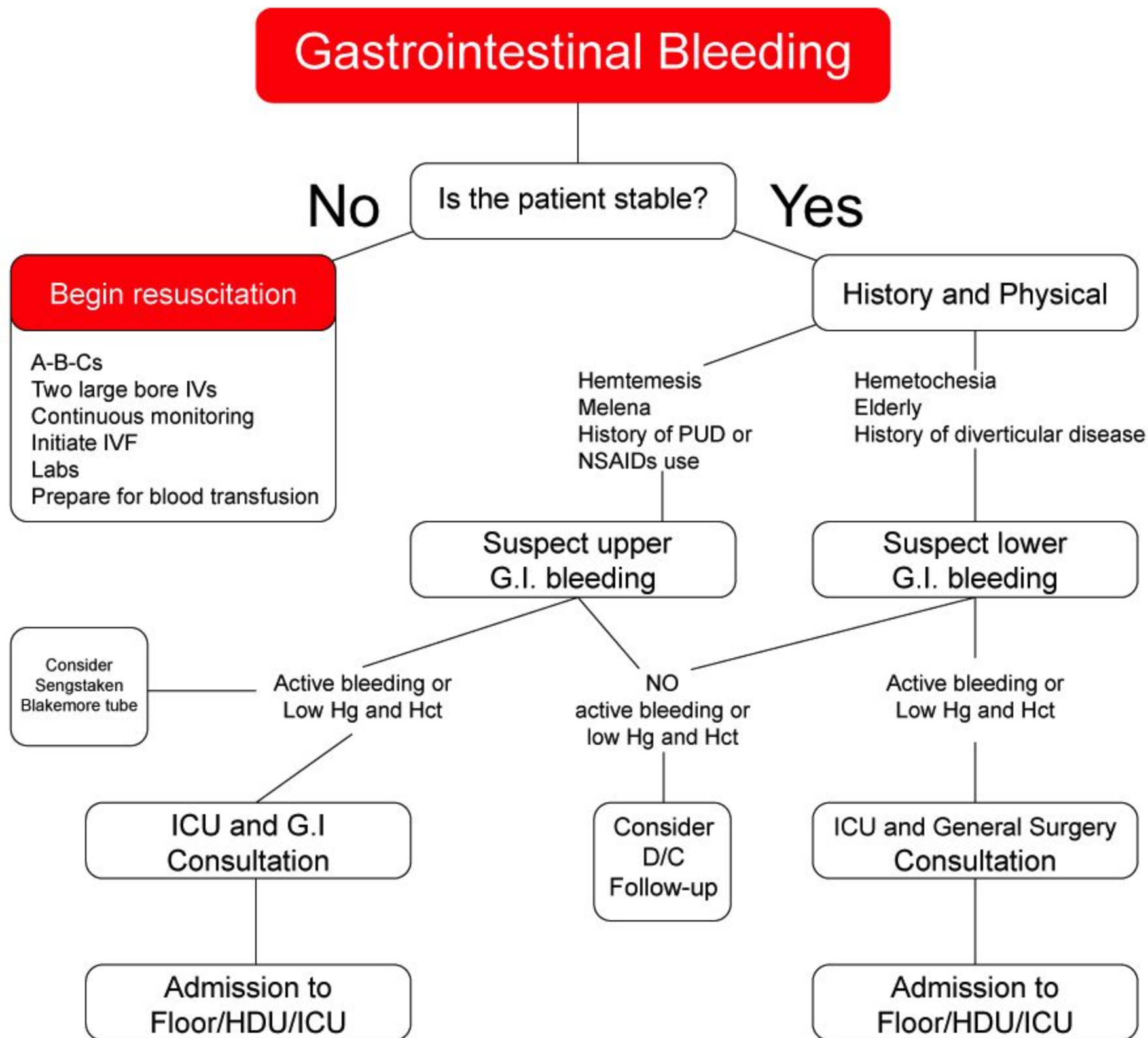


Endoscopy

- **Plan for sedation**
 - Need for ETT for airway protection or general anesthesia?
- **Identify bleeding source**
- **Active bleeding/stigmata of recent hemorrhage**
 - Thermal (probe, forceps)
 - Clips (through-the-scope, over-the-scope)

Figure 1: Approach to GI Bleeding

Moira Carrol, Gurpreet Mudan, and Suzanne Bentley



For severe, ongoing bleeding, immediately transfuse blood products in 1:1:1 ration of PRBSs, plasma, and platelets, as for trauma patients For hemodynamic instability despite crystalloid resuscitation, transfuse 2 to 4 units PRBCs For hemoglobin <8 g/dL (80 g/L) in high-risk patients (eg, older adult, coronary artery disease), transfuse 2 to 4 units PRBCs For hemoglobin <7 g/dL (70 g/L) in low-risk patients, transfuse 2 units PRBCs Give plasma for coagulopathy or after transfusing four units of PRBCs; give platelets for thrombocytopenia (platelets <50,000) or platelet dysfunction (eg, chronic aspirin therapy) or after transfusing four units of PRBCs

Managment of UGIB بال

وشفنا كيف بنعمل Fluid Resuscitation ومتى بيحتاج المريض Blood Transfusion

اليوم ان شاء الله حنكمل بال Management

.....

كل المرضى اللي بيدخلو ب UGIB لازم ولا بد ياخدو PPI ..

اول شي بياخد المريض High Dose of PPI بيبدأ المريض ب 80mg من ال Esomeprazol ك I.V bolus

Our approach is to start a high-dose intravenous (IV) proton pump inhibitor (PPI) for patients with suspected clinically significant upper gastrointestinal bleeding prior to endoscopy as part of their .. initial management

وبعدها بيكمل المريض ب continuously Infusion (8mg/hr)

وبينعمل للمريض Endoscopy

وحسب ال Endoscopy اما بيكمل المريض ع Infusion او بيكمل ع Orally

Early endoscopy — Our approach is to perform upper endoscopy within 24 hours for most patients with upper GI bleeding, but only after adequate resuscitation has been provided. For patients with ...suspected variceal bleeding, we perform endoscopy within 12 hours of presentation

من خلال ال Endoscopy ال Ulcer بتنقسم ل : Classes

The appearance of ulcers can be described using the Forrest classification :

●Class Ia - Spurting hemorrhage

●Class Ib - Oozing hemorrhage

●Class IIa - Nonbleeding visible vessel

●Class IIb - Adherent clot

●Class IIc - Flat pigmented spot

●Class III - Clean ulcer base

.....

لو كان المريض class Ia ,class Ib ,,Class IIa , Class IIb

هدول المرضى بيستمرو ع Continuous Infusion من ال PPI لمدة ثلاث ايام

يبقى في حالات ال Active bleeding او في Clot في ال Ulcer

او في Congested Vessel واحتمال تفرقع ..

فهدول الحالات المريض حيكمل ع PPI Infusion لمدة 72 ساعه

اما Class III □ Calss IIc □ وجود Clear Ulcer بدون bleeding او Clot ف بيتشفيت المريض ع Orally PPI

(Such patients may be switched to a standard-dose oral PPI (eg, omeprazole 20 mg daily

.....

المريض اللي حيمشي على Orall PPI اما حيمشي ع
Standard dose of PPI as Omeprazol 20 mg daily

او حيمشي ع High Dose PPI
As omeprazol 40mg Twice Daily
كيف بنحدد هل المريض حيمشي ع Low or High dose PPI
في Score اسمه Rockall score (مرفق بالصور)

.A score of 2 or less is associated with a low risk of further bleeding or death
المريض اللي Low Risk بيمشي ع Standard dose of PPI

اما لو كان ال Score اكثر من 2 , المريض رح يمشي ع High dose PPI لمدة اسبوعين وبعدها بيتشفيت ع Standard Dose

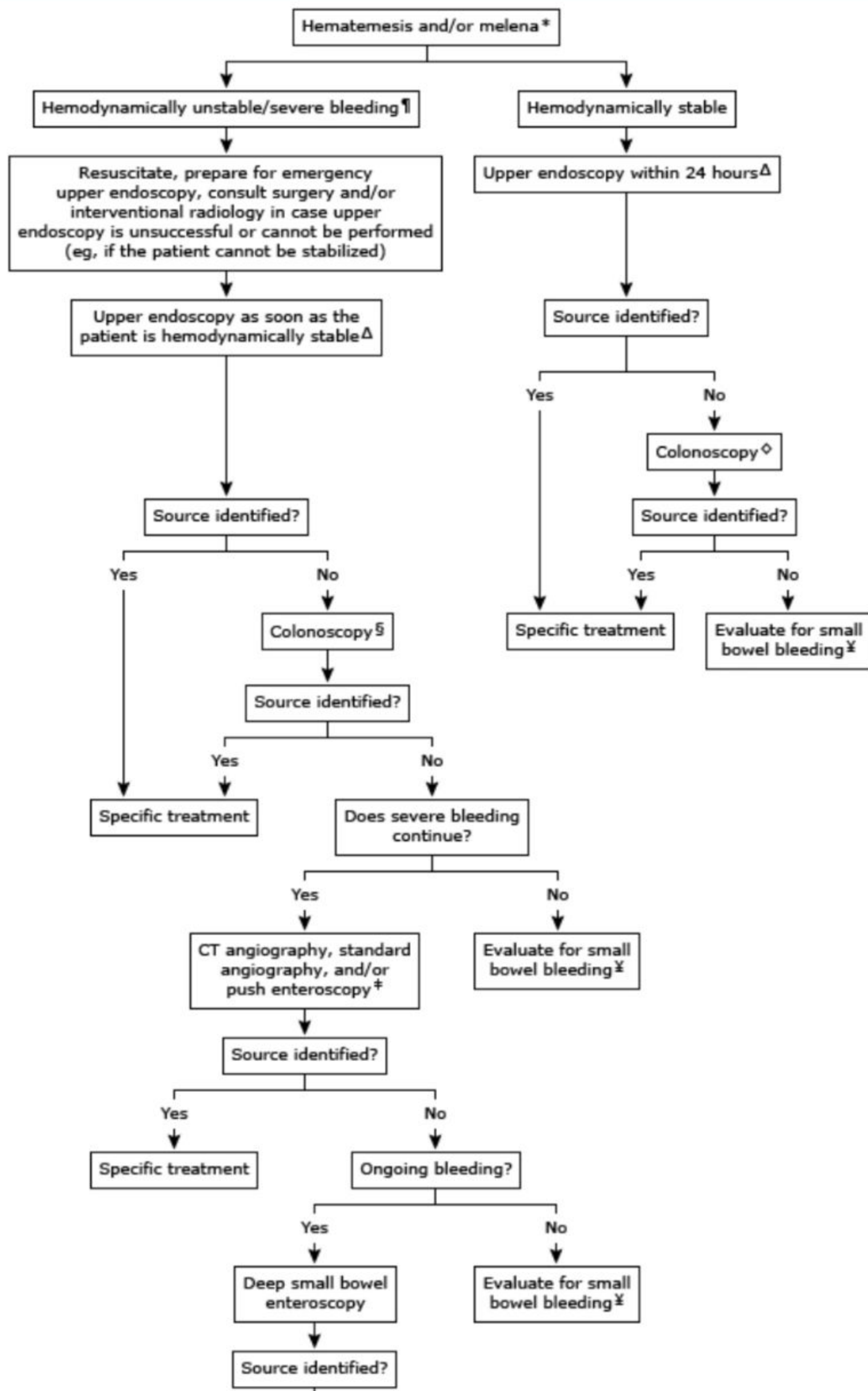
High-dose oral PPIs in patients with high-risk stigmata of recent hemorrhage are continued for a total of two weeks and then changed to a once daily dose

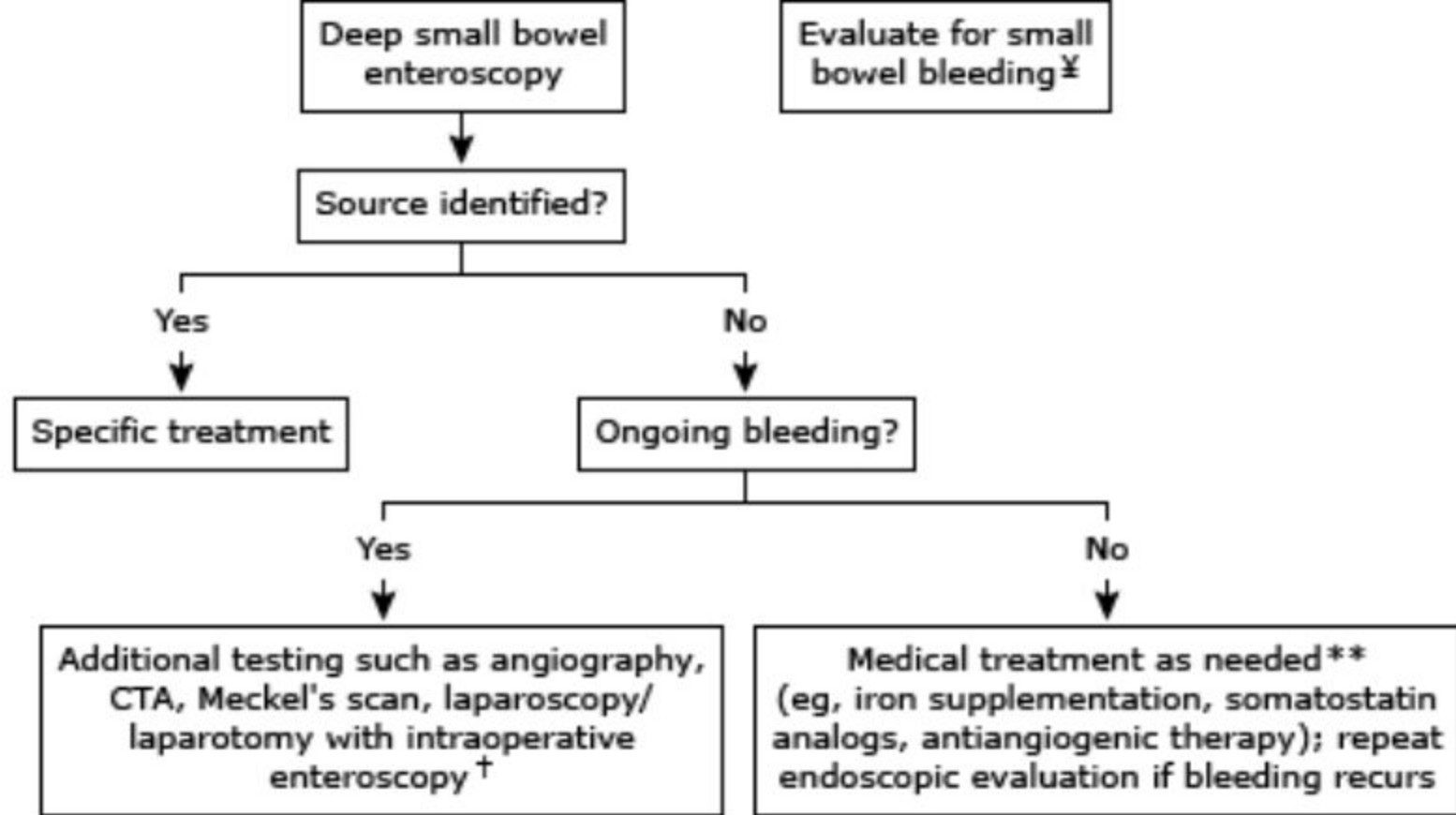
هيك بنكون أجملنا ال PPI therapy لمريض ال UGIB

كل ما يتعلق بال Endoscopy مرفق بالملف
https://t.me/l3lee_afeedk/762?single

#لعلي_أفيدك ٤

Evaluation of suspected upper gastrointestinal bleeding





Rapid overview: Emergency management of upper GI bleeding in adults

Major causes*

Peptic ulcer, esophagogastric varices, arteriovenous malformation, tumor, esophageal (Mallory-Weiss) tear

Clinical features

History

Use of: NSAIDs, aspirin, anticoagulants, antiplatelet agents

Alcohol abuse, previous GI bleed, liver disease, coagulopathy

Symptoms and signs: Abdominal pain, hematemesis or "coffee ground" emesis, passing melena/tarry stool (stool may be frankly bloody or maroon with massive or brisk upper GI bleeding)

Examination

Tachycardia; orthostatic blood pressure changes suggest moderate to severe blood loss; hypotension suggests life-threatening blood loss (hypotension may be late finding in healthy younger adult)

Rectal examination is performed to assess stool color (melena versus hematochezia versus brown)

Significant abdominal tenderness accompanied by signs of peritoneal irritation (eg, involuntary guarding) suggests perforation

Diagnostic testing

Obtain type and crossmatch for hemodynamic instability, severe bleeding, or high-risk patient; obtain type and screen for hemodynamically stable patient without signs of severe bleeding

Obtain hemoglobin concentration (note that measurement may be inaccurate with acute severe hemorrhage), platelet count, coagulation studies (prothrombin time with INR), liver enzymes (AST, ALT), albumin, BUN, and creatinine

Nasogastric lavage may be helpful if the source of bleeding is unclear (upper or lower GI tract) or to clean the stomach prior to endoscopy

Treatment

Closely monitor airway, clinical status, vital signs, cardiac rhythm, urine output, nasogastric output (if nasogastric tube in place)

Do **NOT** give patient anything by mouth

Establish two large bore IV lines (16 gauge or larger)

Provide supplemental oxygen (goal oxygen saturation $\geq 94\%$ for patients without COPD)

Treat hypotension initially with rapid, bolus infusions of isotonic crystalloid (eg, 500 to 1000 mL per bolus; use smaller boluses and lower total volumes for patients with compromised cardiac function)

Transfusion:

For severe, ongoing bleeding, immediately transfuse blood products in 1:1:1 ration of PRBSs, plasma, and platelets, as for trauma patients

For hemodynamic instability despite crystalloid resuscitation, transfuse 2 to 4 units PRBCs

For hemoglobin <8 g/dL (80 g/L) in high-risk patients (eg, older adult, coronary artery disease), transfuse 2 to 4 units PRBCs

For hemoglobin <7 g/dL (70 g/L) in low-risk patients, transfuse 2 units PRBCs

Avoid over-transfusion with possible variceal bleeding

Give plasma for coagulopathy or after transfusing four units of PRBCs; give platelets for thrombocytopenia (platelets $<50,000$) or platelet dysfunction (eg, chronic aspirin therapy) or after transfusing four units of PRBCs

Obtain immediate consultation with gastroenterologist; obtain surgical and interventional radiology consultation for any large-scale bleeding¶

Pharmacotherapy for all patients with suspected or known severe bleeding:

Give a proton pump inhibitor:

Evidence of active bleeding (eg, hematemesis, hemodynamic instability), give esomeprazole or pantoprazole, 80 mg IV

No evidence of active bleeding, give esomeprazole or pantoprazole, 40 mg IV

Endoscopy delayed beyond 12 hours, give second dose of esomeprazole or pantoprazole, 40 mg IV

Pharmacotherapy for known or suspected esophagogastric variceal bleeding and/or cirrhosis:

Give somatostatin or an analogue (eg, octreotide 50 mcg IV bolus followed by 50 mcg/hour continuous IV infusion)

Give an IV antibiotic (eg, ceftriaxone or fluoroquinolone)

Balloon tamponade may be performed as a temporizing measure for patients with uncontrollable hemorrhage likely due to varices using any of several devices (eg, Sengstaken-Blakemore tube, Minnesota tube); tracheal intubation is necessary if such a device is to be placed; ensure proper device placement prior to inflation to avoid esophageal rupture

Calculator: Rockall score for upper gastrointestinal bleeding in adults

Age

- ☐ <60 years old (0 points)
- ☐ 60 to 79 years old (1 point)
- ☐ ≥80 years old (2 points)

Hemodynamic shock

- ☐ None with systolic BP ≥ 100 mmHg and pulse < 100 /min (0 points)
- ☐ Tachycardic with pulse ≥ 100 /min but systolic BP ≥ 100 mmHg (1 point)
- ☐ Hypotension with systolic BP < 100 mmHg (2 points)

Major comorbidities

- ☐ None (0 points)
- ☐ Cardiac failure, ischemic heart disease, or similar major comorbidity (2 points)
- ☐ Renal failure, hepatic failure, or disseminated cancer (3 points)

Diagnosis

- ☐ Mallory-Weiss tear, but no major lesions and no stigmata of recent bleed (0 points)
- ☐ Other nonmalignant gastrointestinal diagnoses (1 point)
- ☐ Upper gastrointestinal tract malignancy (2 points)

Recent hemorrhage

- ☐ None (or dark spot only) (0 points)

Recent hemorrhage

- ☐ None (or dark spot only) (0 points)
- ☐ Blood found in upper gastrointestinal tract (adherent clot, visible or spurting vessel) (2 points)

Total criteria point count:

0

Reset form

Notes

- A score of 2 or less is associated with a low risk of further bleeding or death.
- Please see appropriate UpToDate topic reviews for further information.

References

1. Rockall TA, Logan RF, Devlin HB, Northfield TC. Risk assessment after acute upper gastrointestinal haemorrhage. Gut 1996; 38:316.

مريض 66year old عمل حادث ودخل ICU ب Head Trauma

هل المريض يحتاج acid Suppression وقاية من ال

(Stress Peptic Ulcer (#SUP

وكيف بنحدد مين المرضى اللي بيلزمهم SUP#

.....

مرضى ال ICU ممكن يدخلو ب GI bleeding بسبب ال Stress العالي اللي هم فيه...

وممكن يجي بحاله من الحالات التاليه :

Stress ulceration may be further sub-classified as the following :

●Stress ulceration that is asymptomatic - Ulceration without bleeding.

●Stress ulceration with occult bleeding - Gastric or fecal samples with guaiac-positive testing for blood.

●Stress ulceration with overt bleeding - Hematemesis, frank blood or coffee-grounds in nasogastric aspirate, and/or melena.

●Stress ulceration with clinically important bleeding - Overt bleeding plus one or more of the following:

•Decrease in systolic or diastolic blood pressure ≥ 20 mmHg within 24 hours before or after bleeding

•Orthostatic increase in pulse ≥ 20 beats per minute and decrease in systolic BP > 10 mmHg

•Decrease in hemoglobin > 2 g/dL over 24 hour period or transfusion of ≥ 2 units pack red blood cells within 24 hours after bleeding starts

(•Need for vasopressor support and/or invasive interventions (eg, endoscopy

.....

طبيب مين من المرضى اللي داخل ال ICU بيلزمهم ياخذو AntiSecretory drug لمنع ال Stress Ulcer

اي مريض عنده حاجه من النقاط التاليه يكون المريض High Risk لل Stress Ulcer وبيلزمه ياخذ Acid Suppression

1●Bleeding diathesis (eg, platelet count $< 50,000$ per m^3 , an International Normalized Ratio [INR] > 1.5 , or a partial thromboplastin time [PTT] > 2 times the control value

2●Mechanical ventilation for > 48 hours

3●History of GI ulceration or GI bleeding within the past year

4●Traumatic brain injury, traumatic spinal cord injury, or burn injury

5●Two or more of the following minor criteria: sepsis, an ICU stay more than one week, occult GI bleeding for six or more days, or glucocorticoid therapy (more than 250 mg hydrocortisone or the equivalent)

6●On nonsteroidal antiinflammatory or antiplatelet agents

طبيب كان المريض High Risk وحيأخذ

Acid Suppression

هل يأخذ PPI ولا يأخذ H2RAs

اختيارنا لادويه الحموضه لمنع ال Stress Ulcer يعتمد ع شغلتيين :

□

لو المريض عنده Renal Impairment او Thrompocytopenia وال Platlet count اقل من 150.000 ف بهاي الحاله

المريض رح يمشي على PPI □لانه ال H2RAs بتعمل Thrompocytopenia وبتحتاج Renal dose Adjust

ف عشان هيك بنلجأ لل PPI

اما لو كان المريض ما عنده Renal Impairment وما عنده Thrompocytopenia

فبهلحاله ممكن يمشي ع PPI او H2RAs

□

هل المريض ماشي ع Clopidogrel ولا لا

لو بياخذ clopidogrel ف ال 1st choics هو ال H2RAs ما عدا ال Cimitidine وممنوع ال PPI باستثناء ال Pantoprazol

لو ما بياخذ Clopidogrel فببمشي ع H2RAs لانها less Cost و Effective

most experts consider discontinuing prophylaxis after discharge from the ICU (ie, the patient is no longer critically ill) unless risk factors (eg, coagulopathy, occult blood positivity)

.....

Low risk patients — Among critically ill patients who are not considered high risk for GI bleeding (eg, patients ventilated for less than 48 hours, few morbidities, no coagulopathy or history of GI bleeding), we believe that SUP should be administered on a case-by-case basis. The rationale for this approach is that the benefit is likely to be marginal given the low baseline rate of bleeding in this population (likely <1 percent). Factors that influence the decision include whether the patient is receiving enteral nutrition, the severity of the patient's illness, the number of comorbidities, and other risk factors that may increase the risk of bleeding. Factors that influence agent choice and .duration of SUP are similar to high risk patients

#لعللي أفيدك □

Table 1. Risk Factors for Stress-Related Bleeding

Very High Risk

Prolonged mechanical ventilation (>48 h)
Coagulopathy (INR >1.5 or platelet count <50,000 mm³)

High Risk

Sepsis
Renal failure
Hepatic failure
Hypotension
Trauma
Major surgery (lasting >4 h)
Severe burns (>35% of body surface area)
Anticoagulation
Severe head or spinal cord injury
Myocardial infarction
Neurologic surgery
Multiple organ failure
Ileus
High-dose corticosteroids
History of gastrointestinal bleeding
Low intragastric pH

*INR: international normalized ratio.
Source: References 1, 7.*

Table 2. ICU Patients in Whom SUP Is Indicated

History of GI ulceration or bleeding ≤ 1 y before admission

Coagulopathy

≥ 2 risk factors: sepsis, ICU stay > 1 wk, occult bleeding ≥ 6 days,
high-dose corticosteroid use

Glasgow Coma Score < 10 or inability to obey simple commands

Thermal injury to $> 35\%$ of body surface area

Hepatic failure or partial hepatectomy

Multiple trauma

Organ transplant

Spinal cord injury

GI: gastrointestinal; SUP: stress ulcer prophylaxis.

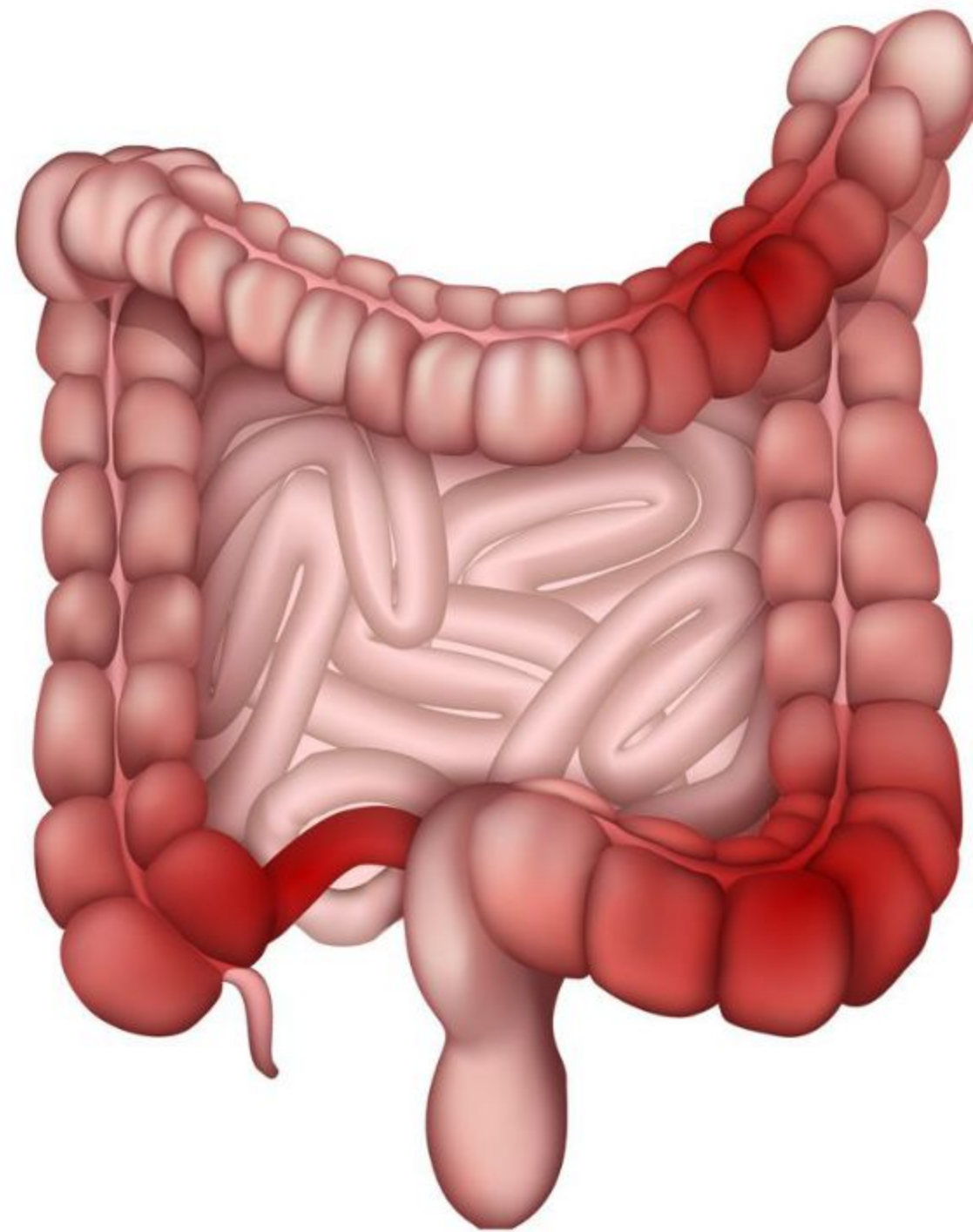
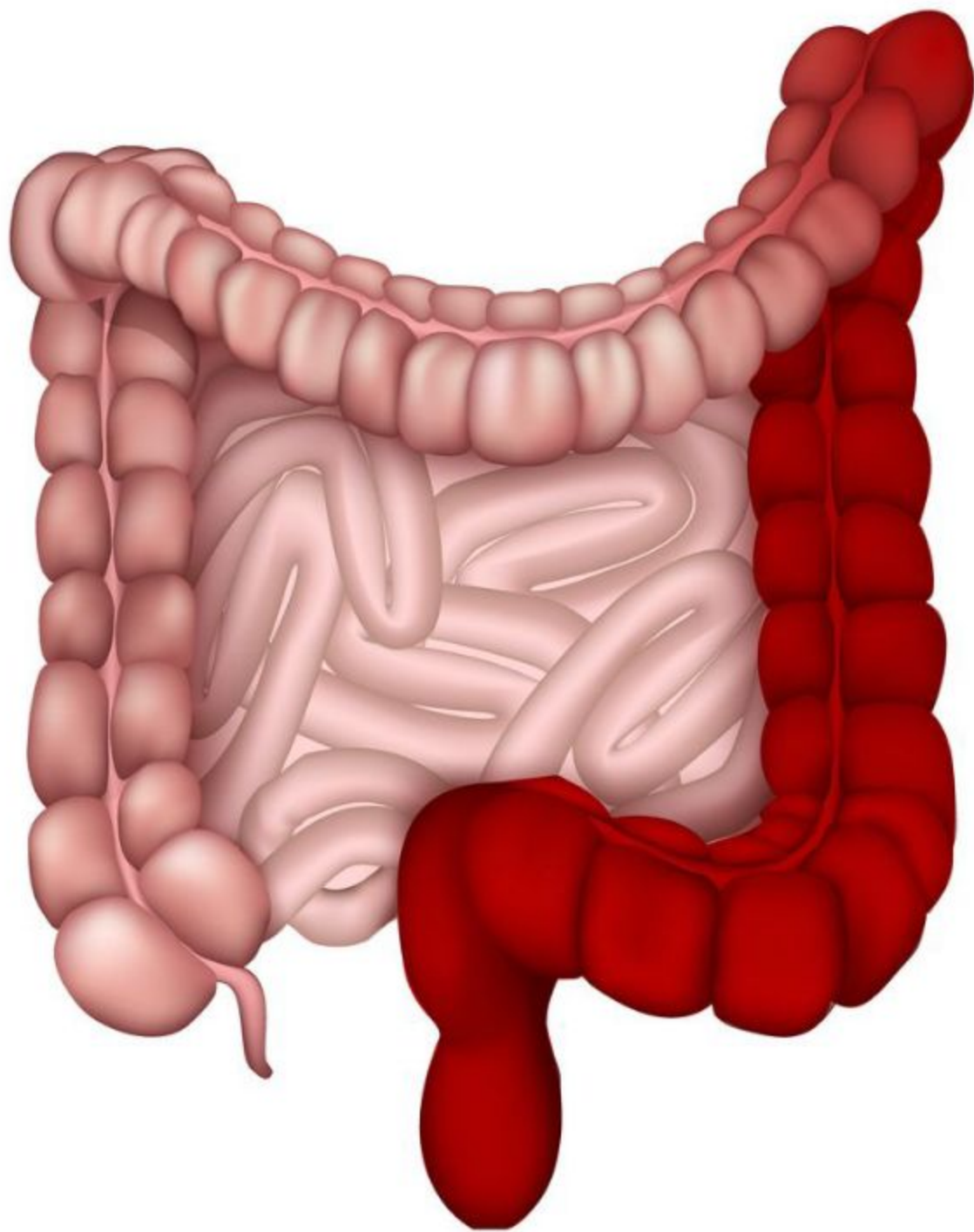
Source: Reference 2.

7□ Various proinflammatory cytokines, including interleukin-1, interleukin-6, and tumor necrosis factor (TNF), contribute to the ongoing inflammatory process

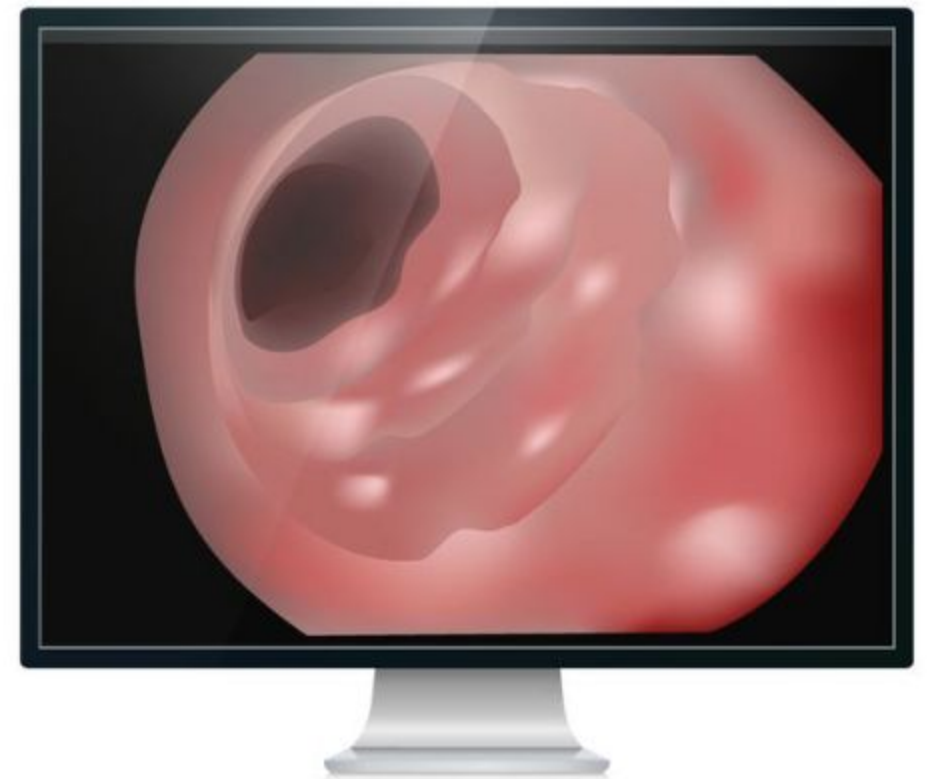
اليوست القادم ان شاء الله رح نكمل مع ال Clinical Manifestation لل IBD

#لعلي_أفيدك ٤

Inflammatory bowel disease (IBD)



Ulcerative colitis



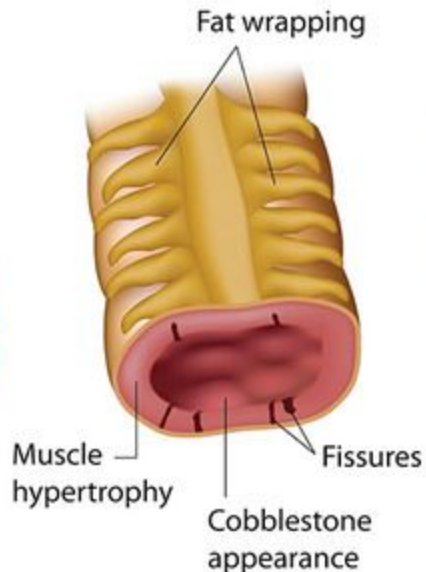
Crohn's disease

Inflammatory Bowel Disease

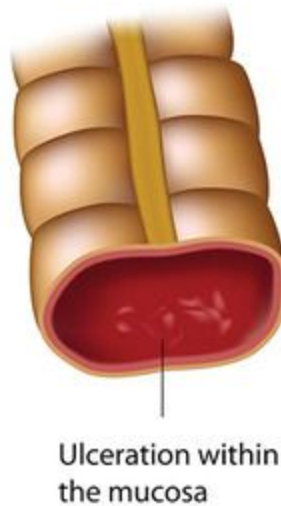
Healthy



Crohn's disease



Ulcerative colitis



اليوم ان شاء الله رح نكمل مع ال Manifestation of IBD

غالبية مرضى ال IBD سواء UC او CD بيكون عندهم احد الاعراض التاليه :

Diarrhea (bloody or Watery or mucopurulent)

.. Fever , Abdominal pain , Weight lose

نشوف التفاصيل لل Ulcerative Colitis manifestation ..

في عنا كذا Score System لتقسيم ال U.C (مرفقين بالصور وموجودين ع تطبيق .. MDcalc)

Truelove &Witt severity Index

بيعتمد على

Bowel Movement ,Blood in stool ,fever puls ,Anemia ,ESR (Erythrocyte Sedimentation Rate)

Montreal classification of IBF

نفس تصنيف ال Truelove score بس بيضيفله المنطقه المصابه Extent

The Mayo scoring system can also be used to assess disease severity and monitor patients during therapy

.Scores range from 0 to 12 with higher scores indicating more severe disease

حسب ال Truelove&Witt score بنقسم ال U.C لاربع تقسيمات :

1 (Mild U.C (less than or Equal 4 stool/day +/- Blood

هنا المريض بيكون ما عنده fever ولا Tachycardia ولا انيميا

With Normal ESR

2 Moderate U.C (5,6 stool per day +/- blood)

With mild anemia not requiring blood transfusions, and abdominal pain that is not severe. Patients have minimal signs of systemic toxicity, including a low-grade fever.

3 Sever U.C (7,8,9,10 stool per day With Blood)

with severe cramps and evidence of systemic toxicity as demonstrated by a fever (temperature $\geq 37.5^{\circ}\text{C}$), tachycardia (HR ≥ 90 beats/minute), anemia (hemoglobin < 10.5 g/dL), or an elevated ESR (≥ 30 mm/hour). Patients may have rapid weight loss.

4 Fulminant U.C toxic megacolon (more than 10 stool Perday)

Continuous bleeding need Transfusion , abdominal pain, distension, and acute, severe toxic symptoms including fever > 37.5 and anorexia , HR > 90 , ESR > 30

Patients with fulminant colitis are at high risk of developing toxic megacolon as the inflammatory process extends beyond the mucosa to involve the muscle layers of the colon.

Perforation - Perforation of the colon most commonly occurs as a consequence of toxic megacolon

في extraintestinal manifestations بتصير مع ال U.C
مرفقه في جدول بالتفاصيل ...
البوست القادم ان شاء الله رح نكمل مع Chrons Manifestation

#لعلي_أفيدك ٤



CREATOR

EVIDENCE

NEXT STEPS

CALCULATOR

Yes

No

Pyrexia

Defined as temperature $\geq 100.04^{\circ}\text{F}$ (37.8°C)

Yes

No

Pulse >90 bpm

Yes

No

Anemia

Defined as hemoglobin ≤ 10.5 g/dL (105 g/L)

>30

≤ 30

**Erythrocyte
sedimentation rate,
mm/hr**



Severity of ulcerative colitis

RESULT

Mild



CREATOR

EVIDENCE

NEXT STEPS

CALCULATOR

Stratifies severity of ulcerative colitis.

▼ Why Use

▼ Pearls/Pitfalls

▼ When to Use

<4

4-5

≥6

**Bowel movements
per day**

**None or no more than small
amounts of blood**

Between mild and severe

Visible blood

Blood in stool



Severity of ulcerative colitis

RESULT

Mild



Montreal Classification for IBD



CREATOR

EVIDENCE

NEXT STEPS

CALCULATOR

▼ Why Use

▼ Pearls/Pitfalls

▼ When to Use

Crohn's disease

Ulcerative colitis

Type of IBD

Extent (E)

Ulcerative proctitis: involvement limited to the rectum (i.e., proximal extent of inflammation is distal to the rectosigmoid junction) (E1)

Left-sided UC (also known as distal UC): involvement limited to the portion of the colorectum distal to the splenic flexure (E2)

Extensive UC (also known as pancolitis): involvement extends proximal to the splenic flexure (E3)

Severity (S)

UC in clinical remission: no symptoms of UC (S0)

Mild UC: ≤ 4 bloody stools daily, lack of fever, pulse < 90 bpm, hemoglobin ≥ 10.5 g/dL (105 g/L), erythrocyte sedimentation rate < 30 mm/hr (S1)

Moderate UC: > 4 -5 stools daily but with minimal signs of systemic toxicity (S2)

Severe UC: ≥ 6 bloody stools daily, pulse ≥ 90 bpm, temperature $\geq 99.5^{\circ}\text{F}$ (37.5°C), hemoglobin < 10.5 g/dL (105 g/L), and erythrocyte sedimentation rate ≥ 30 mm/hr (S3)



Mayo DAI for Ulcerative Colitis



CREATOR

EVIDENCE

NEXT STEPS

CALCULATOR

0

None

+1

Visible blood with stool
less than half the time

+2

Visible blood with stool
half of the time or more

+3

Passing blood alone

Rectal bleeding

3 points requires
patients to have
 $\geq 50\%$ of BMs with
visible blood AND ≥ 1
BM with blood alone.



Mayo DAI for Ulcerative Colitis



CREATOR

EVIDENCE

NEXT STEPS

CALCULATOR

Assesses severity of ulcerative colitis.

▼ Why Use

▼ Pearls/Pitfalls

▼ When to Use

Content contributed by John Vizuite, MD, MPH

0 **Normal**

+1 1-2 stools/day more than normal

+2 3-4 stools/day more than normal

+3 >4 stools/day more than normal

Stool frequency

[CREATOR](#)[EVIDENCE](#)[NEXT STEPS](#)[CALCULATOR](#)

Mucosal appearance at endoscopy

0	Normal or inactive disease
+1	Mild disease (erythema, decreased vascular pattern, mild friability)
+2	Moderate disease (marked erythema, absent vascular pattern, friability, erosions)
+3	Severe disease (spontaneous bleeding, ulceration)

0	Normal
+1	Mild
+2	Moderate
+3	Severe

Physician rating of
disease activity

Extraintestinal manifestations of inflammatory bowel disease

Common extraintestinal manifestations

Musculoskeletal

Arthritis – Colitic type, ankylosing spondylitis, isolated joint involvement such as sacroiliitis.

Hypertrophic osteoarthropathy – Clubbing, periostitis, metastatic Crohn disease.

Miscellaneous – Osteoporosis, aseptic necrosis, polymyositis, osteomalacia.

Skin and mouth

Reactive lesions – Erythema nodosum, pyoderma gangrenosum, aphthous ulcers, vesiculopustular eruption, cutaneous vasculitis, neutrophilic dermatosis, metastatic Crohn disease, epidermolysis bullosa acquisita.

Specific lesions – Fissures and fistulas, oral Crohn disease, drug rashes.

Nutritional deficiency – Acrodermatitis enteropathica (zinc), purpura (vitamins C and K), glossitis (vitamin B), hair loss and brittle nail (protein).

Associated diseases – Vitiligo, psoriasis, amyloidosis, epidermolysis bullosa acquisita.

Hepatobiliary

Specific complications – PSC and bile duct carcinoma, small duct PSC, cholelithiasis.

Hepatobiliary

Specific complications – PSC and bile duct carcinoma, small duct PSC, cholelithiasis.

Associated inflammation – Autoimmune chronic active hepatitis, pericholangitis, portal fibrosis and cirrhosis, granuloma in Crohn disease.

Metabolic – Fatty liver, gallstones associated with ileal Crohn disease.

Ocular

Uveitis iritis, episcleritis, scleromalacia, corneal ulcers, retinal vascular disease, retrobulbar neuritis, Crohn keratopathy.

Metabolic

Growth retardation in children and adolescents, delayed sexual maturation.

Less common extraintestinal manifestations

Blood and vascular

Anemia due to iron, folate, or vitamin B12 deficiency or autoimmune hemolytic anemia, anemia of chronic disease, thrombocytopenic purpura; leukocytosis and thrombocytosis; thrombophlebitis and thromboembolism, arteritis and arterial occlusion, polyarteritis nodosa, Takayasu arteritis, cutaneous vasculitis, anticardiolipin antibody, hyposplenism.

Renal and genitourinary tract

Urinary calculi (oxalate stones in ileal disease), local extension of Crohn disease involving ureter or bladder, amyloidosis, drug-related nephrotoxicity.

Renal tubular damage with increased urinary excretion of various enzymes (eg, beta N-acetyl-D-glucosaminidase).

Neurologic

Up to 3% of patients may have non-iatrogenic neurologic involvement, including peripheral neuropathy, myelopathy, vestibular dysfunction, pseudotumor cerebri, myasthenia gravis, and cerebrovascular disorders. Incidence equal in ulcerative colitis and Crohn disease. These disorders usually appear 5 to 6 years after the onset of inflammatory bowel disease and are frequently associated with other extraintestinal manifestations.

Airway and parenchymal lung disease

Pulmonary fibrosis, vasculitis, bronchitis, necrobiotic nodules, acute laryngotracheitis, interstitial lung disease, sarcoidosis. Abnormal pulmonary function tests without clinical symptoms are common (up to 50% of cases).

Cardiac

Pericarditis, myocarditis, endocarditis, and heart block – More common in ulcerative colitis than in Crohn disease; cardiomyopathy, cardiac failure due to anti-TNF therapy.

Pericarditis may also occur from sulfasalazine/5-aminosalicylates.

Pancreas

Acute pancreatitis – More common in Crohn disease than in ulcerative colitis. Risk factors include 6-mercaptopurine and 5-aminosalicylate therapy, duodenal Crohn disease.

Autoimmune

Drug-induced lupus and autoimmune diseases secondary to anti-TNF-alpha therapy.

Positive ANA, anti-double-stranded DNA, cutaneous and systemic manifestations of lupus.

PSC: primary sclerosing cholangitis; TNF: tumor necrosis factor; ANA: antinuclear antibody.

بدأنا البوست السابق بتقسيم ال Ulcerative Colitis ل
.. Mild - Moderate - Sever
وشفنا اهم Manifestation اللي بيجي فيها المريض

خلينا نكمل مع ال Crohns Disease وكيف بيتم تقييم الحالة ...

الفايده من تقسيم ال IBD ل Mild - Moderate - Sever هو تحديد العلاج المناسب للحاله زي ما حنشوف لاحقا ...

ASSESSING DISEASE ACTIVITY, SEVERITY, AND RISK

في ثلاث تصنيفات تُستخدم لتقييم حاله مريض ال Crohns disease (مرفقين بالصور بالتفاصيل)

Crohn's Disease Activity Index (CDAI)

Harvey-Bradshaw Index (HBI)

(American Gastroenterological Association (AGA

ال AGA بيعتمد بتصنيفه على تقسيم المريض ل Low risk او High Risk حسب ال Endoscopy وال Laboratory
Parameter زي ال C-reactive protein and/or fecal calprotectin
والمناطق اللي مصابه هل بال Upper ولا lower GI

Low-risk patients with mild Crohn disease have the following features :

- No or mild symptoms
- Normal or minimal elevation in C-reactive protein and/or fecal calprotectin levels
- Diagnosis at age >30 years
- Limited distribution of bowel inflammation
- Superficial or no ulceration on colonoscopy
- Lack of perianal complications
- No prior intestinal resections
- Absence of penetrating or stricturing disease

Patients initially identified as low risk may be subsequently reclassified as higher risk if they develop complications or don't respond to initial treatment

High-risk patients with moderate to severe Crohn disease may have the following features :

- High-risk patients also include patients who have not responded to glucocorticoids (ie, refractory) or .who relapse after achieving clinical remission following induction therapy with glucocorticoids

#لعلی أفیدك ؟

Calculator: Crohn's Disease Activity Index (CDAI) in adults

Input:

Sex ☐ Female (0)

☐ Male (1)

Weight

kg



Height

cm



Hematocrit

%



Average number of liquid or soft stools per day over 7 days (14 points per stool)

#



Using diphenoxylate or loperamide for diarrhea

☐ No (0)

☐ Yes (30)

Average abdominal pain rating over 7 days

☐ None (0)

☐ Mild pain (35)

☐ Moderate pain (70)

☐ Severe pain (105)

General wellbeing each day over 7 days

- ☐ Well (0)
- ☐ Slightly below average (49)
- ☐ Poor (98)
- ☐ Very poor (147)
- ☐ Terrible (196)

Arthritis or arthralgia

- ☐ No (0)
- ☐ Yes (20)

Iritis or uveitis

- ☐ No (0)
- ☐ Yes (20)

Erythema nodosum, pyoderma gangrenosum, or aphthous stomatitis

- ☐ No (0)
- ☐ Yes (20)

Anal fissure, fistula, or abscess

- ☐ No (0)
- ☐ Yes (20)

Other fistula

- ☐ No (0)
- ☐ Yes (20)

Temperature over 100°F (37.8°C) in the last week

- ☐ No (0)
- ☐ Yes (20)

Finding of an abdominal mass

- ☐ No mass (0)
- ☐ Possible mass (20)
- ☐ Definite mass (50)

Results:

Standard weight		kg v
Weight deviation points		points v
Absolute hematocrit deviation		% v
CDAI		points v

CDAI interpretation

0 to 149 points:	Asymptomatic remission
150 to 220 points:	Mildly to moderately active Crohn disease
221 to 450 points:	Moderately to severely active Crohn disease
451 to 1100 points:	Severely active to fulminant disease

Notes

- Patients requiring steroids to remain asymptomatic are not considered to be in remission but are referred to as being "steroid dependent."
- Absolute deviation of hematocrit is simply the difference in hematocrit from standard. A male patient with a hematocrit of 40% has an absolute deviation of 7.
- Percent deviation from standard weight is $(1 - \text{weight}/\text{standard weight}) \times 100$, thus positive percent deviation represents weight loss, adding points to the CDAI.
- Please see appropriate UpToDate topic reviews for further information.
- Standard weight is calculated as follows:

Standard weight for men (kg) = $(\text{height in m})^2 \times 22.1 \text{ (kg/m}^2\text{)}$

Standard weight for women (kg) = $(\text{height in m})^2 \times 20.8 \text{ (kg/m}^2\text{)}$

Equations used

Standard weight = (1 if the following expression is true, 0 if false)(Sex == 0) * ((Height/100)² * 20.8) + (1 if the following expression is true, 0 if false)(Sex == 1) * ((Height/100)² * 22.1)

Weight deviation points = 100 * (1 - (Weight / Standard weight))

Absolute hematocrit deviation = (1 if the following expression is true, 0 if false)(Sex == 0) * (42 - Hematocrit) + (1 if the following expression is true, 0 if false)(Sex == 1) * (47 - Hematocrit)

Stool count factor = Average number of liquid or soft stools per day over 7 days (14 points per stool) * 14

CDAI = Stool count factor + Using diphenoxylate or loperamide for diarrhea + Average abdominal pain rating over 7 days + General wellbeing each day over 7 days + Arthritis or arthralgia + Iritis or uveitis + Erythema nodosum, pyoderma gangrenosum, or aphthous stomatitis + Anal fissure, fistula, or abscess + Other fistula + Temperature over 100°F (37.8°C) in the last week + Finding of an abdominal mass + Weight deviation points + (6 * Absolute hematocrit deviation)

Calculator: Harvey-Bradshaw Index of Crohn's disease activity in adults

Patient sense of general wellbeing in the last 24 hours

- ☐ Very well (0 points)
- ☐ Somewhat below normal (1 point)
- ☐ Poor (2 points)
- ☐ Very poor (3 points)
- ☐ Terrible (4 points)

Patient report of abdominal pain in last 24 hours

- ☐ None (0 points)
- ☐ Mild (1 point)
- ☐ Moderate (2 points)
- ☐ Severe (3 points)

Number of liquid stools in last 24 hours

stools

Finding of an abdominal mass

- ☐ No mass (0 points)
- ☐ Possible mass (1 point)
- ☐ Definite mass (3 points)
- ☐ Mass present and tender (4 points)

Complications

- ☐ Arthralgias (1 point)
- ☐ Uveitis (1 point)
- ☐ Erythema nodosum (1 point)
- ☐ Aphthous ulcers (1 point)
- ☐ Pyoderma gangrenosum (1 point)
- ☐ Anal fissure (1 point)
- ☐ Newly discovered fistula (1 point)
- ☐ Abscess (1 point)

Total criteria point count:

Reset form

Harvey-Bradshaw Index interpretation

0 to 4 points: Clinical remission
5 to 7 points: Mildly active disease
8 to 16 points: Moderately active disease
17 to 100 points: Severely active disease

Crohn's disease ال Classification ال شفا ال
 حنضيف عليهم كمان تصنيف ونشوف ال Manifestation

لو مريض كرونز وتقييمه كان كالتالي A2 L3 B1 شو معنى الرموز السابقه

حسب ال Montreal classification for Crohn disease

بتعتمد على ثلاث عوامل :

A: Age of Diagnosis

L: Location

B: Behavior

ال Age اللي اتشخص فيه المريض بياخد رقم من تلاته A1 او A2 او A3

A1 below 16 years

A2 between 17 and 40 years

A3 above 40 years

ال Location

L1 ileal

L2 colonic

L3 ileocolonic

L4 isolated upper disease

ال Behavior

B1 nonstricturing, nonpenetrating

B2 stricturing

B3 penetrating

p perianal disease modifier

وبناء على عليهم بينعطى للمريض تصنيف ALB

خلينا نشوف موضوع اليوم اللي هو ال :

♀ (Manifestation of Crohn's Disease (CD

غالبيه مرضى CD بيحبو Cardinal symptoms اللي هي :

abdominal pain, diarrhea (with or without gross bleeding), fatigue, and weight loss ..

(1 Abdominal Pain (Crampy Abdominal Pain

Cramping .. ال هو عنده ..

• A patient with disease limited to the distal ileum frequently presents with right lower quadrant pain

بعض مرضى ال CD بيكون ما في عندهم Symptoms لحد ما يصير في Narrowing ال Intestine Lumen بسبب ال

Inflammation

وساعتها بيصير عنده Abdominal pain ك علامه لحدوث Obstruction

2 ● Diarrhea - Diarrhea is a common presentation, but bowel symptoms often fluctuate over a long

...period of time

في كذا سبب بيخلي مريض ال IBD بشكل عام يدخل ب Diarrhea

١- بسبب ال Inflammation اللي بال Intestine بيصير في خلل بال Fluid Absorption فبتتراكم ال Fluid بال Intestine

٢- ال Bile salt اللي بينفرز بال Intestine ما يقدر يرجع تاني وما بيصيرله Reabsorption بسبب ال inflamed terminal ileum
فبتسبب

Steatorrhea related to loss of bile salts

3□□Systemic symptoms - Fatigue is a common feature of CD. Weight loss is often related to decreased oral intake because patients with obstructing segments of bowel feel better when they do not eat. Weight loss may also be related to malabsorption.

.....

Complication Of CD :

●Fistulas :

Fistulas are tracts or communications that connect two epithelial-lined organs. For example, fistulas may connect the intestine to bladder (enterovesical), to skin (enterocutaneous), to bowel (enteroenteric), or to the vagina (enterovaginal).

- Enterointestinal fistulas may be asymptomatic or present as a palpable mass
- Enterovesical fistulas lead to recurrent urinary tract infections, often with multiple organisms, and to pneumaturia
- Fistulas to the retroperitoneum may lead to psoas abscesses or ureteral obstruction with hydronephrosis
- Enterovaginal fistulas may present with passage of gas or feces through the vagina
- Enterocutaneous fistulas can cause bowel contents to drain to the surface of the skin

●Phlegmon/abscess

a walled-off inflammatory mass without bacterial infection) that may be palpated on physical examination of the abdomen. Ileal involvement is suggested by a mass in the right lower quadrant.

●Other gastrointestinal features

٤□□لو ال CD وصل لل Mouth بيعمل

.aphthous ulcer or pain in the mouth and gums

٤□□اما لو كان بال Esophagus ف بيجي المريض ب
.odynophagia or dysphagia

15% من ال CD بي involving ال Stomach وال Duodenum

وبيعمل اعراض شبه اعراض ال .. Peptic Ulcer
abdominal pain, nausea, and/or postprandial vomiting

The distal antrum of the stomach and duodenum are the most commonly affected upper gastrointestinal (GI) sites in patients with CD. Some patients have limited upper GI involvement and may be asymptomatic, while other patients with persistent symptoms have deep ulcerations and longer segments of intestinal involvement.

● Perianal disease

patients with perianal fistula may present with perianal pain and drainage, while patients with perianal abscess present with perianal pain, fever, and purulent discharge. ● Malabsorption
Patients with small bowel CD and bile salt malabsorption may present with watery diarrhea and steatorrhea that can lead to protein calorie malnutrition, hypocalcemia, vitamin deficiency (eg, vitamin B12), and metabolic bone disease

● Extraintestinal manifestations

(ملخصين بجدول بالصور)

ال Diagnosis لل IBD مرفق ع الرابط
https://t.me/l3lee_afeedk/802?single

البوست القادم ان شاء الله رح نبدأ بالادويه اللي بتستخدم لل IBD

#لعلي_أفيدك

Montreal classification for Crohn disease

Age at diagnosis
A1 below 16 years
A2 between 17 and 40 years
A3 above 40 years
Location
L1 ileal
L2 colonic
L3 ileocolonic
L4 isolated upper disease*
Behavior
B1 nonstricturing, nonpenetrating
B2 stricturing
B3 penetrating
p perianal disease modifier ¶

* L4 is a modifier that can be added to L1-L3 when concomitant upper gastrointestinal disease is present.

¶ "p" is added to B1-B3 when concomitant perianal disease is present.

Extraintestinal manifestations of inflammatory bowel disease

Common extraintestinal manifestations

Musculoskeletal

Arthritis – Colitic type, ankylosing spondylitis, isolated joint involvement such as sacroiliitis.

Hypertrophic osteoarthropathy – Clubbing, periostitis, metastatic Crohn disease.

Miscellaneous – Osteoporosis, aseptic necrosis, polymyositis, osteomalacia.

Skin and mouth

Reactive lesions – Erythema nodosum, pyoderma gangrenosum, aphthous ulcers, vesiculopustular eruption, cutaneous vasculitis, neutrophilic dermatosis, metastatic Crohn disease, epidermolysis bullosa acquisita.

Specific lesions – Fissures and fistulas, oral Crohn disease, drug rashes.

Nutritional deficiency – Acrodermatitis enteropathica (zinc), purpura (vitamins C and K), glossitis (vitamin B), hair loss and brittle nail (protein).

Associated diseases – Vitiligo, psoriasis, amyloidosis, epidermolysis bullosa acquisita.

Hepatobiliary

Specific complications – PSC and bile duct carcinoma, small duct PSC, cholelithiasis.

Associated inflammation – Autoimmune chronic active hepatitis, pericholangitis, portal fibrosis and cirrhosis, granuloma in Crohn disease.

Metabolic – Fatty liver, gallstones associated with ileal Crohn disease.

Ocular

Uveitis iritis, episcleritis, scleromalacia, corneal ulcers, retinal vascular disease, retrobulbar neuritis, Crohn keratopathy.

Metabolic

Growth retardation in children and adolescents, delayed sexual maturation.

Less common extraintestinal manifestations

Blood and vascular

Anemia due to iron, folate, or vitamin B12 deficiency or autoimmune hemolytic anemia, anemia of chronic disease, thrombocytopenic purpura; leukocytosis and thrombocytosis; thrombophlebitis and thromboembolism, arteritis and arterial occlusion, polyarteritis nodosa, Takayasu arteritis, cutaneous vasculitis, anticardiolipin antibody, hyposplenism.

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Urinary calculi (oxalate stones in ileal disease), local extension of Crohn disease involving ureter or bladder, amyloidosis, drug-related nephrotoxicity.

Renal tubular damage with increased urinary excretion of various enzymes (eg, beta N-acetyl-D-glucosaminidase).

Neurologic

Up to 3% of patients may have non-iatrogenic neurologic involvement, including peripheral neuropathy, myelopathy, vestibular dysfunction, pseudotumor cerebri, myasthenia gravis, and cerebrovascular disorders. Incidence equal in ulcerative colitis and Crohn disease. These disorders usually appear 5 to 6 years after the onset of inflammatory bowel disease and are frequently associated with other extraintestinal manifestations.

Airway and parenchymal lung disease

Pulmonary fibrosis, vasculitis, bronchitis, necrobiotic nodules, acute laryngotracheitis, interstitial lung disease, sarcoidosis. Abnormal pulmonary function tests without clinical symptoms are common (up to 50% of cases).

Cardiac

Pericarditis, myocarditis, endocarditis, and heart block – More common in ulcerative colitis than in Crohn disease; cardiomyopathy, cardiac failure due to anti-TNF therapy.

Pericarditis may also occur from sulfasalazine/5-aminosalicylates.

Pancreas

Acute pancreatitis – More common in Crohn disease than in ulcerative colitis. Risk factors include 6-mercaptopurine and 5-aminosalicylate therapy, duodenal Crohn disease.

Autoimmune

Drug-induced lupus and autoimmune diseases secondary to anti-TNF-alpha therapy.

Positive ANA, anti-double-stranded DNA, cutaneous and systemic manifestations of lupus.

PSC: primary sclerosing cholangitis; TNF: tumor necrosis factor;
ANA: antinuclear antibody.

Maintenance dose: 2 g/day in divided doses at ≤ 8 -hour intervals when endoscopic exam confirms improvement

Dosage adjustment: If GI intolerance occurs, reduce dosage by 50% and gradually increase to target dose over several days. If GI intolerance persists, stop therapy for 5 to 7 days and reintroduce at a lower daily dose.

Crohn disease (mild to moderately active) (off-label use): Oral: 3 to 6 g/day in divided doses for up to 16 weeks

□Balsalazide

(5-aminosalicylic acid +4-aminobenzoyl-beta-alanine)

May administer with or without food. Maintain adequate hydration during therapy (to minimize nephrolithiasis risk).

□Dose

Ulcerative colitis, remission induction: Oral:

Capsule: 2.25 g 3 times daily for 8 to 12 weeks.

Tablet: Males: 3.3 g twice daily for up to 8 weeks.

Ulcerative colitis, remission maintenance (off-label use): Capsule: 1.5 or 3 g twice daily for 6 to 12 months

□Olsalazine

Administer with food in evenly divided doses. Maintain adequate hydration during therapy (to minimize nephrolithiasis risk).

□Dose

Ulcerative colitis, remission maintenance: Oral: 1 g/day in 2 divided doses.

Ulcerative colitis, remission induction (off-label use): Oral: 2 to 3 g/day in 2 to 4 divided doses

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

ال Azo compound كلها prodrug بمجرد وصولها الى Intestine ييسر لها Cleavage وتحرر لل Active compound
5Aminosalicylic acid (5-ASA)

mechanism of action of 5-ASA is unknown; however, it is thought that it modulates local chemical mediators of the inflammatory response, especially leukotrienes, and is also postulated to be a free radical scavenger or an inhibitor of tumor necrosis factor (TNF); action appears topical rather than systemic

أشهر SE لل Azo compound خصوصا ال Sulfasalazine

- Dose-related adverse effects (due to the sulfapyridine portion): GI disturbance, headache, arthralgia, folate malabsorption

فبنصح المريض يأخذ folic acid supplement

- Idiosyncratic adverse effects: rash, fever, pneumonitis, hepatotoxicity, bone marrow suppression, hemolytic anemia, pancreatitis, decreased sperm production in men

□ So CBC should be done 3-6 month of therapy

□Serum creatinine should be monitored in Renal fauliler pateint

- Avoid in patients with a sulfa allergy

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

البوست القادم ان شاء الله رح نكمل مع ثاني مجموعته بتحتوي على ال 5Aminosalicylic acid اللي هي ال Mesalamine

#لعلي_أفيدك ؟

- Nutritional support
- Probiotics

Surgery

Biologic therapy

Immunosuppressants

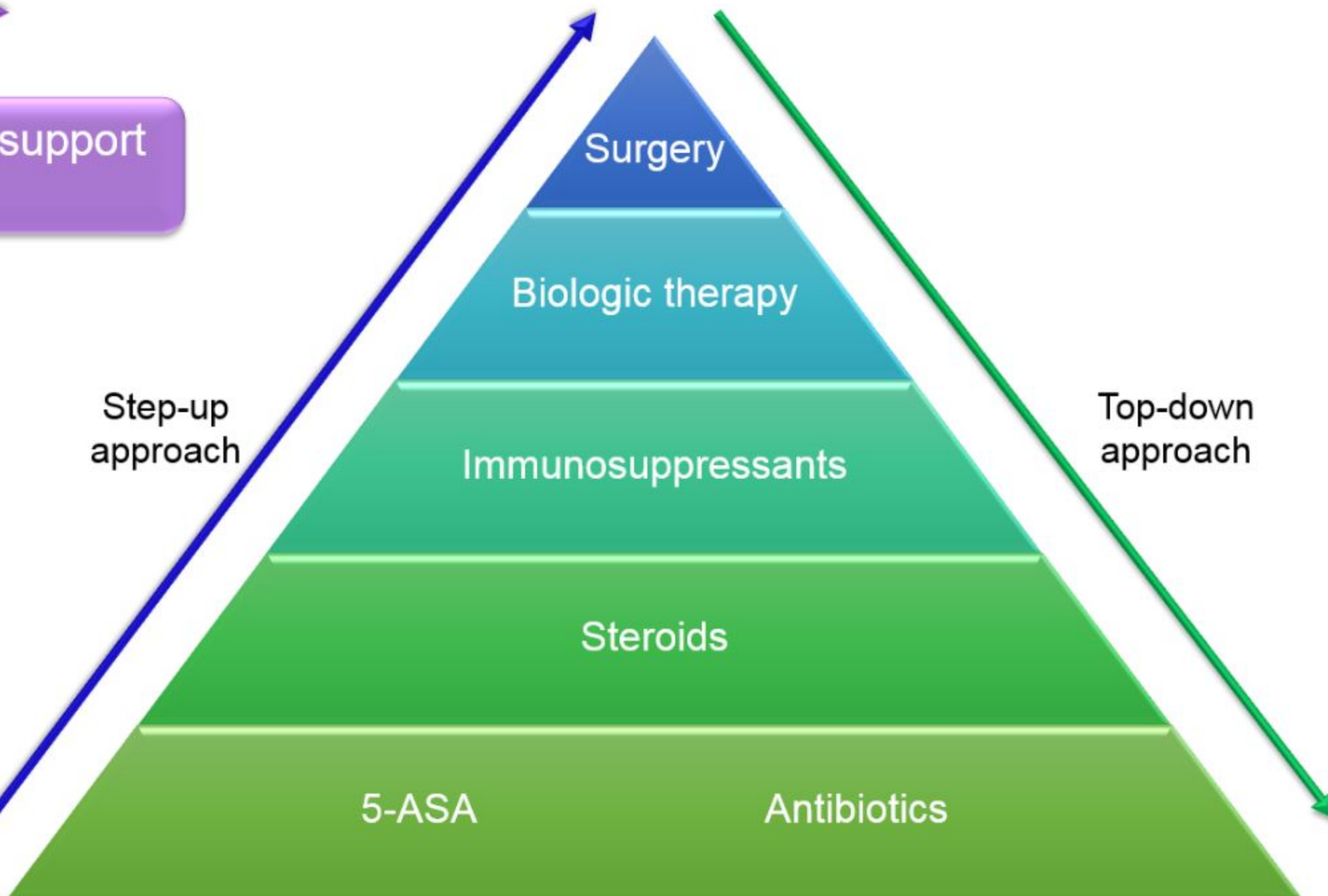
Steroids

5-ASA

Antibiotics

Step-up
approach

Top-down
approach



Sulfasalazine

Sulfasalazine

response after 12 weeks of therapy

- **Ulcerative colitis, Prolongation of remission between episodes**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily
- **Ulcerative colitis, Treatment of mild to moderate disease**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily
- **Ulcerative colitis, Treatment of severe disease; Adjunct**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily

Sulfasalazine

- **Ulcerative colitis, Prolongation of remission between episodes**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily
- **Ulcerative colitis, Treatment of mild to moderate disease**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily
- **Ulcerative colitis, Treatment of severe disease; Adjunct**
 - Initial, 3 to 4 g/day orally in evenly divided doses, not exceeding 8-hour dosage intervals; initiate with smaller dosage of 1 to 2 g daily to reduce possible gastrointestinal intolerance. Adjust to individual response and tolerance; if daily doses exceeding 4 g are required to achieve desired affect, risk of toxicity should be considered.
 - Maintenance, 2 g orally daily

Balsalazide Disodium

Adult Dosing

- **Important Note**

- Prior to initiation of balsalazide disodium capsules (Colazal(R)), evaluate renal function.
- Orphan drug designation: Treatment of ulcerative colitis in pediatric patients

- **General Dosage Information**

- Efficacy of Giazol(R) has not been demonstrated in women
- Efficacy and safety of Giazol(R) has not been established beyond 8 weeks

- **Ulcerative colitis (Mild to Moderate), Active**

- (Colazal(R) capsule) 2.25 g (three 750 mg capsules) orally 3 times daily for up to 8 weeks; some patients required treatment for up to 12 weeks in clinical trials
- (Giazol(R) tablet) Men, 3.3 g orally twice daily for up to 8 weeks

Olsalazine Sodium

Adult Dosing

- **Important Note**
 - Evaluate renal function prior to initiation.
- **Ulcerative colitis, Maintenance**
 - 500 mg orally twice daily

... Drug used in IBD management

عرفنا من المنشور السابق انه الادويه اللي بتستخدم لل IBD هي :

Aminosalicylic Acid Derivative-1

2Corticosteroid

3Immunomodulator

4Biological agent

وبدأنا بمجموعة ال 5Aminosalicylic Acid Derivative

اللي بتشتغل على تقليل ال Inflammatory mediator

وكانت عبارته عن مجموعتين اللي هم ٤:

Azo compound

اللي كانت عبارته عن 5ASA مرتبط مع مركب ثاني

واشهر مثال عليها هو ال Sulfasalazine

وشفنا جرعاته واشهر SE ال ..

وكان سبب ال SE لل Azo compound ناتج عن المجموعات الكيميائية المرتبطة بال 5ASA

ف على سبيل المثال اغلب ال SE لل Sulfasalazine كانت ناتجة عن وجود ال Sulfapyridin المرتبط بال 5ASA

عشان هيك فكرو انهم يعملو مجموعه ثانيه بحيث تكون بتحتوي على ال 5ASA لحاله ..

ف طلع عنا مجموعه ال

Mesalamine

ال Mesalamine عبارته عن pure 5ASA

وهي ال First line في حالات ال

Mild-Moderate ulcerative Colitis & Crohns Disease

وفي منه كذا Dosage form كل شكل ال استخدام حسب ال

Site of disease & Severity

(Enema (Rowasa

بتستخدم لو كان ال UC في ال Rectum او/و ال Terminal colon

الجرعه 4gm مره واحده يوميا قبل النوم

Delayed-release capsule Delayed release resin

(Delzicol Asacol HD®) Swallow capsule whole with water

تستخدم لو كان ال Site of inflammation في ال Colon او/و ال Distal ileum

Dose : Initial 800 mg (two 400-mg capsules) orally 3 times daily for 6 weeks with or without food

(Maintenance dose 1.6 to 2.4 g/day in 1 to 4 divided doses)

□ Suppository (Canasa®) for Rectum inflammation

1 g once daily at bedtime

□ Microgranular-coated tablet (Pentasa®)

Site of Action colon & Small bowel
Administer with meals.

Dose : Initial dosing 1 g 4 times daily.
Maintenance of remission : 1.5 to 4 g/day in 3 to 4 divided doses

□ Multimatrix (MMX) delayed-release tablet (Lialda®)

Administer with a meal
Site of Action Colon

Dose : Initial dosing 2.4 to 4.8 g once daily.
Maintenance of remission : 2.4 to 3.6 g once daily

□ Intellicor delayed- and extended-release capsule
(Apriso®)

Swallow capsule whole
Site of Action Colon

Dose :
Initial dosing 1.5 to 4.5 g once each morning
Maintenance of remission : 1.5 to 3 g once daily

.....

البوست القادم ان شاء الله رح نشوف ال Corticosteroid وجرعاتهم في ال IBD

#لعللي أفيدك ؟

100 slow release tablets

Pentasa® 500 mg

Mezlocillin 500 mg
Compound 4.0

PCN 1110

Dosing and Indications

Adult Dosing

- **Important Note**

- Do not substitute 2 Delzicol(R) 400-mg capsules for 1 mesalamine delayed-release 800-mg tablet.
- As of April 1, 2013, Asacol(R) is no longer being distributed in the United States; only Asacol(R) HD is available.
- Orphan drug designation: Treatment of pediatric ulcerative colitis

- **General Dosage Information**

- (Rectal suppositories) Safety and efficacy have not been established beyond 6 weeks.

- **Mild to moderate ulcerative colitis, Active**

- (Asacol(R) HD delayed-release tablet) 1600 mg (two 800-mg tablets) orally 3 times daily for 6 weeks (FDA dosage)
- (Delzicol(R) delayed-release capsule) 800 mg (two 400-mg capsules) orally 3 times daily for 6 weeks with or without food (FDA dosage)
- (Lialda(R) delayed-release tablet) 2.4 or 4.8 g (two to four 1.2-g tablets) orally once daily with a meal for up to 8 weeks (FDA dosage)
- (Pentasa(R) controlled-release capsule) 1 g orally 4 times daily; total dose 4g/day; duration for up to 8 weeks used in clinical trials (FDA dosage)

Mesalamine

Mesalamine

- (Rowasa(R)) 1 rectal instillation of 4 g (60 mL) once daily at bedtime (retain for 8 hours) for 3 to 6 weeks (FDA dosage)
- Mildly active left-sided UC: At least 1 g/day rectally; preferably give with at least 2 g/day orally in single or divided doses based on patient preference (guideline dosage)
- Mildly active extensive UC: At least 2 g/day orally; may dose once daily or in divided doses based on patient preference (guideline dosage)
- Mildly active UC of any extent: A low dose (2 to 2.4 g/day) rather than high dose (4.8 g/day) is suggested as there is no difference in the remission rate (guideline dosage)
- Concomitant medication, mildly to moderately active UC: If failed to respond to oral mesalamine therapy, budesonide multimatrix 9 mg/day orally may be added to therapy (guideline dosage)

Mesalamine

- **Proctosigmoiditis (Mild to Moderate), Active ulcerative**
 - (enema) 4 g RECTALLY once daily at bedtime (retain for 8 hours) for 3 to 6 weeks
- **Ulcerative colitis, Maintenance of Remission**
 - (Apriso(TM) extended-release capsule) 1.5 g orally once daily in the morning (FDA dosage)
 - (Delzicol(TM) delayed-release capsules) 1.6 g/day orally in 2 to 4 divided doses with or without food (FDA dosage)
 - (Lialda(R) delayed-release tablet) 2.4 g (two 1.2-g tablets) orally once daily with a meal (FDA dosage)
 - Mildly active left-sided or extensive ulcerative colitis: At least 2 g/day orally (guideline dosage):
- **Ulcerative proctitis, chronic, Maintenance of Remission**
 - Mildly active disease: 1 g/day rectally (guideline dosage)
- **Ulcerative proctitis, chronic (Mild to Moderate), Active**
 - (Enema) 1 rectal instillation of 4 g (60 mL) once daily at bedtime (retain for 8 hours) for 3 to 6 weeks (FDA dosage)
 - (Suppository) 1000-mg suppository rectally (retain for at least 1 to 3 hours) once daily at bedtime for 3 to 6 weeks (FDA dosage)
 - Mildly active disease: 1 g/day rectally (guideline dosage)

متى مريض ال IBD يمشي على Corticosteroid وشو الانواع اللي بيقدر ياخذها ...

شفنا المرة الماضيه ال

(Aminosalicylic Acid Derivative (5ASA-5

وعرفنا انه ال 5ASA ممكن نستخدمها في حالات ال Active IBD و ك Maintenance

اليوم حنشوف ثاني مجموعه تستخدم لعلاج ال IBD وهي ال Corticosteroid ..

الكورتيزونات استخداما الاساسي يكون في حالات ال Active IBD

□ Corticosteroids Work quickly to suppress inflammation during acute flares

وما اله Role في حالات ال Maintenance ..

الا انه 50% من مرضى ال Sever IBD ممكن يمشو عليه ك Maintenance لكن لفته لا تتجاوز ال 3 شهور ..

ال Corticosteroid ممكن نستخدم ال Oral Form او ال IV form او ال .. Topical

□□ Oral formulation :

: 1□ Budesonide

ميزة ال Budesonide انه اله High First pass metabolism

ف يشتغل Locally على ال GI بدون ما بعمل Systemic SE

فال Tablet او ال Capsule لل Budesonide بيصير لها Releas بال Terminal Ileum وبال Ascending Colon

واله efficacy عاليه ف هو أقوى من ال prednidolone ب 15 ضعف

Dose of Budesonide :

□ Ulcerative colitis (active): Oral: Tablet: 9 mg once daily in the morning for up to 8 weeks.

□ Crohn disease, mild to moderate (active) Oral:

Capsules: 9 mg once daily in the morning for up to 8 weeks; recurring episodes may be treated with a repeat 8-week course of treatment.

Maintenance of remission: Oral: Capsules: Following treatment of active disease (control of symptoms with Crohn Disease Activity Index [CDAI] <150), treatment may be continued at a dosage of 6 mg once daily for up to 3 months. If symptom control is maintained for 3 months, tapering of the dosage to complete cessation is recommended. Continued dosing beyond 3 months has not been demonstrated to result in substantial benefit.

2□ Prednisolone

□ Crohn disease

(moderate to severe or select patients with mild disease), induction:

Note: Not for long-term use

Oral: 40 to 60 mg once daily for 7 to 14 days, followed by a taper of up to 3 months (eg, reduce dose by 5 mg/day at weekly intervals until 20 mg/day is reached, then further reduce by 2.5 to 5 mg/day at weekly intervals)

Tapering regimens vary; some experts recommend a more rapid taper with a goal of discontinuing therapy within 1 to 2 months; if symptoms return, may resume therapy and taper more slowly

☐Ulcerative colitis (moderate to severe)...

Oral: 40 to 60 mg/day in 1 to 2 divided doses. Clinical improvement is expected within 7 days; pace of tapering (usually over 1 to 3 months) should be guided by symptoms, cumulative steroid exposure, and onset of action of additional therapies

لو مريض كان ماشي ع Prednisolone وبده يحول ل Budesonide
 بنبدأه ال Budesonide مع ال Prednisolone وينسحب ال Prednisolone بالتدريج على فتره اسبوعين
 لانه ال Budesonide ما الـ Systemic Effect
 فينسحب ال Prednisolone بالتدريج لمنع ال

Corticosteroid Withdrawal Effect ..

□□□□□□□□□□□□□□□□

IV formulation

1-Hydrocortisone :

Ulcerative colitis, acute (severe), remission induction (off- label dose): IV: 100 mg every 6 to 8 hours

Some experts recommend not exceeding 300 mg/day to decrease the risk of colectomy

2□ Methylprednisolone :

☐ Crohn disease, acute (eg, severe/fulminant disease and/or unable to take oral) (adjunctive agent):

Note: Not for long-term use
IV (succinate): 40 to 60 mg/day

- Ulcerative colitis, acute (severe or fulminant): Note: Not for long-term use.

IV (succinate): 40 to 60 mg/day in 1 to 3 divided doses. If response to treatment is inadequate after 5 days (severe) or 3 days (fulminant), second-line therapy is initiated

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Topical corticosteroid
Hydrocortisone-based products

Used for patients with distal disease

Suppositories; use for proctitis

Ulcerative colitis, mild to moderately active (alternative agent):

Induction of remission:

Rectal suppository: 1 suppository (25 or 30 mg) once daily, may increase after 2 weeks to 1 suppository twice daily.

Note: Use concurrently with either the rectal foam or enemas in patients with proctosigmoiditis (eg, >18 cm involvement)

Rectal foam: 1 applicatorful (90 mg) once or twice daily. Rectal enema: 1 enema (100 mg/60 mL unit) once or twice daily.

Duration of therapy: Usually 3 to 4 weeks; once improvement is demonstrated, may taper gradually to a nightly regimen

Corticosteroid in IBD هيك بنكون جمعنا ال

البوست القادم رح نبليش بالمجموعه التالته .. Immunomodulator

#لعللي أفيدك

Budesonide Extended-Release

Tablets

9 mg

M
BE9

Swallow tablet whole, do not chew,
crush, or break.



Mylan®

Rx only

30 Tablets

كنا بدأنا بالبوستات السابقة باول مجموعتين بالادويه اللي تستخدم في علاج ال IBD ...
اللي هم ال 5ASA , وال Corticosteroid وخلصناهم بتفاصيلهم

اليوم حنكمل مع ثالث مجموعه دوائيه تستخدم لل IBD ...
Immunomodulator

في ثلاث ادويه بتندرج تحت عائله ال : Immunomodulator

- 1 Mercaptopurine
- 2 Azathioprine
- 3 Methotrexate

ميزة ادويه ال Immunomodulator انه إلها Steroid Sparing Effect
يعني بتقلل احتماليه انه المريض يمشي ع Corticosteroid ..

بيستخدمو Mainly لل Maintenance لانهم بيحتاجو من 3-15 شهر ك Onset of Action

Immunomodulator

(purinethol) (MP) (Mercaptopurine)

بيستخدم Mainly لل

Crohn disease (remission maintenance or steroid-sparing therapy) (off-label use): Oral: 0.75 to 1.5 mg/kg/day in combination with an anti-TNF agent (eg, adalimumab, infliximab)

Ulcerative colitis, remission maintenance (off-label use): Oral: 1 to 1.5 mg/kg/day

قبل ما يبدأ المريض على ال purinethol بينعمله test لانزيم ال TPMT وانزيم ال NUDT15

Consider testing for thiopurine S-methyltransferase (TPMT) and nudix hydrolase 15 (nucleotide diphosphatase [NUDT15]) deficiency

لانه ال Mercaptopurine (وال Azathioprine) عشان يصيرلها Metabolisim بتحتاج هذول الانزيمين
وفي ناس عندهم Deficiency لل TPMT /NUDT15 ف اللي عنده deficiency بيحتاج Dose Adjustment (مرفق بالصور)
لمنع ال MP toxicity ..

في مرضى اللي عندهم Renal Impairment وال CrCl اقل من 50 بنبدأهم بال Lowest Effective Dose او بنخلي الفتره
بين ال Doses من 36-48 ساعه

Immunomodulator

(®Azathioprine (Imuran

GI Irritation ال بيتاخذ بعد الاكل لتقليل ال

Doses :

□ Crohn disease (remission maintenance or steroid-sparing therapy)

Oral: 1.5 to 2.5 mg/kg/day in combination with an anti-TNF agent (eg, adalimumab, infliximab)

□ Crohn disease, management after surgical resection

Oral: Monotherapy: 2 to 2.5 mg/kg/day; begin within 2 to 4 weeks after surgery and continue for 12 to 24 months

Oral :Combination therapy (in combination with metronidazole): 100 mg daily (<60 kg) or 150 mg daily (≥60 kg) for up to 52 weeks or 2 mg/kg/day for ~18 months after surgery

Note: The benefit of azathioprine may be increased when given in combination with a 3-month course of metronidazole

- Ulcerative colitis, remission induction (off-label use): Oral: 2.5 mg/kg/day in combination with infliximab)

Ulcerative colitis, remission maintenance (off-label use): Oral: 2.5 mg/kg/day

severe bone marrow toxicities في حالة المريض دخل ب

بنعمله بردو تيست لل TPMT/NUDT15 ولو كان عنده Deficiency بينعمله Dose Adjustment (مرفق بالصور) ...

Dosage reduction or selection of alternative therapy is recommended in patients with TPMT and/or .NUDT15 deficiency

❓ في حالات ال Renal Impairment بتتعدل الجرعه حسب CrCl

CrCl >50 mL/minute: No adjustment recommended.

CrCl 10 to 50 mL/minute: Administer 75% of normal dose.

CrCl <10 mL/minute: Administer 50% of normal dose.

Hemodialysis (moderately dialyzable; ~45% removed in 8 hours): Administer 50% of normal dose; supplement: 0.25 mg/kg.

CRRT: Administer 75% of normal dose.

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

(Methotrexate (MTx

يستخدم فقط في حالات ال Crohns Disease ولا يستخدم لل Ulcerative Colitis ..

□ Crohn disease, corticosteroid dependent or remission maintenance (off-label use): IM, SUBQ: 25 mg once weekly; may reduce dose to 15 mg once weekly if steroid-free remission maintained for 4 months

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

اما ال Azathioprine وال MP فأشهر SE إلهم :

#لعلي أفيدك ؟

Dosage adjustment for TPMT and/or NUDT15 deficiency:

Clinical Pharmacogenetics Implementation Consortium (CPIC) guidelines (Relling 2019):

*Normal TPMT **or** NUDT15 activity (wild type):* No initial dosage adjustment necessary; adjust dose based on condition being treated. Allow at least 2 weeks after each dosage adjustment to reach steady state. For patients receiving combination therapy, dosage adjustments (of all agents) should be made without any emphasis on mercaptopurine compared to other agents.

TPMT intermediate or possible intermediate metabolizer **or** *NUDT15 intermediate or possible intermediate metabolizer* : Initiate mercaptopurine with the dose reduced to 30% to 80% of the usual dose and adjust dose based on the degree of myelosuppression and condition being treated. Allow 2 to 4 weeks after each dosage adjustment to reach steady state. If myelosuppression occurs, the focus should be on reducing the mercaptopurine dose over other agents (depending on concomitant therapy). If the starting dose is already below the normal recommended dose, dose reduction may not be recommended.

TPMT poor metabolizer: When used for malignancy, initiate mercaptopurine at a drastically reduced dose (reduce the daily dose by 10-fold and reduce the frequency from once daily to 3 times a week). Adjust dose based on the degree of myelosuppression and condition being treated. Allow 4 to 6 weeks after each dosage adjustment to reach steady state. If myelosuppression occurs, the focus should be on reducing the mercaptopurine dose over other agents (depending on concomitant therapy). When used for nonmalignant conditions, consider alternative (non-thiopurine) immunosuppressant therapy.

NUDT15 poor metabolizer: When used for malignancy, initiate mercaptopurine at 10 mg/m²/day. Adjust dose based on the degree of myelosuppression and condition being treated. Allow 4 to 6 weeks after each dosage adjustment to reach steady state. If myelosuppression occurs, the focus should be on reducing the mercaptopurine dose over other agents (depending on concomitant therapy). When used for nonmalignant conditions, consider alternative (non-thiopurine) immunosuppressant therapy.

Dosing: Renal Impairment: Adult

CrCl $\geq$ 50 mL/minute: There are no dosage adjustments provided in the manufacturer's labeling.

CrCl < 50 mL/minute: Initiate with the lowest recommended starting dose or increase the dosing interval to every 36 to 48 hours to avoid accumulation in patients with renal impairment adjust dose to maintain desirable ANC level and for adverse reactions.

Administration: Adult

Oral: Administer at the same time(s) each day.

Administer preferably on an empty stomach (Burton 1986; Kantarjian 2000); avoid concomitant milk products if possible (de Lemos 2007). The manufacturer recommends taking consistently either with or without food.

If adherence is limited by administering on an empty stomach in the evening or by avoiding concomitant milk products, simplification of administration (eg, take with food/dairy without regard to time of day) should be considered. In adherent patients (taking mercaptopurine regularly), no association was seen between risk of ALL relapse and mercaptopurine ingestion habits; there was also no association noted with red cell thioguanine nucleotide (TGN) levels and administration with food, dairy, or time of day (Landier 2017).

Dosage adjustment for TPMT and/or NUDT15 deficiency:

Clinical Pharmacogenetics Implementation Consortium guidelines (CPIC [Relling 2019]):

*Normal TPMT **or** NUDT15 activity (wild type):* No initial dosage adjustment necessary; adjust dose based on condition being treated. Allow 2 weeks after each dosage adjustment to reach steady state.

*TPMT intermediate or possible intermediate metabolizer **or** NUDT15 intermediate or possible intermediate metabolizer :* Initiate azathioprine with the dose reduced to 30% to 80% of the usual dose and adjust based on the degree of myelosuppression and condition being treated. Allow 2 to 4 weeks after each dosage adjustment to reach steady state. If the starting dose is already below the normal recommended dose, dose reduction may not be recommended.

Azathioprine: Drug information

TPMT poor metabolizer: When used for nonmalignant conditions, consider alternative (non-thiopurine) immunosuppressant therapy. For malignancy, initiate azathioprine at a drastically reduced dose (reduce the daily dose by 10-fold and reduce the frequency from once daily to 3 times a week). Adjust dose based on the degree of myelosuppression and condition being treated. Allow 4 to 6 weeks after each dosage adjustment to reach steady state.

NUDT15 poor metabolizer: When used for nonmalignant conditions, consider alternative (non-thiopurine) immunosuppressant therapy. For malignancy, initiate azathioprine at a drastically reduced dose (reduce the daily dose by 10-fold). Adjust dose based on the degree of myelosuppression and condition being treated. Allow 4 to 6 weeks after each dosage adjustment to reach steady state.

Dosing: Renal Impairment: Adult

There are no specific dosage adjustments provided in the manufacturer's labeling; however, oliguric patients, particularly those with tubular necrosis in the immediate post-transplant period (deceased donor transplant) may have delayed clearance and typically receive lower doses. The following adjustments have been recommended (Aronoff 2007):

CrCl >50 mL/minute: No adjustment recommended.

CrCl 10 to 50 mL/minute: Administer 75% of normal dose.

CrCl <10 mL/minute: Administer 50% of normal dose.

Hemodialysis (moderately dialyzable; ~45% removed in 8 hours): Administer 50% of normal dose; supplement: 0.25 mg/kg.

CRRT: Administer 75% of normal dose.

وأخيرا ؟ وصلنا لآخر مجموعه دوائيه تستخدم فى علاج ال IBD

(حتكون ع بوستين ان شاء الله)

.. Biological_Agent#

Biological Agent في مجموعتين بتدرج تحت مجموعه ال

□ Tumor necrosis factor antagonist (TNF@)

Monoclonal Antibody

(Infliximab , Adalimumab , Certolizumab , Golimumab)

□ leukocyte Adhesion Inhibitor

((Natalizumab , Vedolizumab

❓ أي مريض حيمشي على ال TNF@ لازم ينعمله

CBC ,Blood Glucose Level , Fluid& Electrolyte balance

Liver function test ,Kideny Function Test

وَمهم جدا ينعمل Rolve out لل Viral Hepatitis & TB

لأنه أدويه ال TNF @ بتعمل Activation لل Latent Infection ف لو المريض كان عنده latent HBV او Latent TB وبدأ

على ال Infiximab **يُصير** عند Activation لل hepatitis B او لل TB

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

: Infliximab

ال infliximab يستخدم لل Induction وال Maintenance وفى حالات ال Fistulaizing cronhs Disease ..

Induction therapy الجرعه بينعطى المريض 5mg/kg ك

وبتعداد کمان مره بعد اسبوعین وبعد 4 اسابيع

وبعدھا ہمیشی Maintenance کل 8 اسابیم ..

IV: 5 mg/kg at 0, 2, and 6 weeks, followed by 5 mg/kg every 8 weeks thereafter

(At Infusion Rate at least 2 hour)

dose may be increased to 10 mg/kg every 8 weeks in patients who respond but then lose their

response. If no response by week 14, consider discontinuing therapy

أشهر SE لل infliximab هو ال Infusion Related Reaction

يعمل Anaphylaxis Shock بتظهر ك

hypotension Fever □ chills , Angioedema

والحل هو توقيف ال Infusion فوراً ونعالج ال Anaphylaxis

اما لو كان ال Infusion reaction بسيط ؛ ي مثلا headach او mild rash ف نعمل تقليل لال Infusion Rate و نراقب

المريض .

Other SE to infliximab

- ## 1□ Pancytopenia (Bone marrow Depression)

- ## 2□ Infection Reactivation (as TB,HBV)

- ### 3▯ Increases Liver Enzymes

لو ال ALT وال AST زاد خمس اضعاف ال Normal Upper Limit بيتوقف العلاج ..

- ## 5 Heart Failure (HF) exacerbation

ال infliximab ممنوع يعطى لمرضى ال HF اللى ب Stage3/4

وَممكن ينعطى ل Stage1/2 HF بشرط ما تزيد الجرعه عن

5mg/kg

- ## 6 Black BOX warning

Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with tumor necrosis factor (TNF) blockers, including infliximab.

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Adalimumab

Adalimumab نفس ال infliximab من حيث ال Efficacy

بس ميزته انه Fully Humanized Antibody اما ال infliximab كان جزء منه Humanized وجزء من الفئران

ف ال Adalimumab ما يعمل Antibodies Development

جرعته :

Initial: 160 mg (given on day 1 or split and given over 2 consecutive days), then 80 mg 2 weeks later (day 15).

Maintenance: 40 mg every other week beginning day 29.

Note: Some patients may require 40 mg every week as maintenance therapy

[illegible]

certolizumab

Dose :

SubQ: Initial: 400 mg, repeat dose 2 and 4 weeks after initial dose; Maintenance: 400 mg every 4 weeks

بنحصل على أعلى response لل certolizumab في حالة لو كان ال CRP كان أعلى من 10mg/l

□□□□□□□□□□□□□□□□

golimumab:

SubQ: Induction: 200 mg at week 0, then 100 mg at week 2, followed by maintenance therapy of 100 .mg every 4 weeks

يسعد مساكم ؟

GIT_29 #IBS#

وقفنا لعند اخر دوائين في مجموعه ال Biological Agent ..

اللي بيشتغلو على تثبيط ال leukocytes وبالتالي يقلل ال Inflammation في ال GI

وهذول الدوائين بنلجأهم في حالات ال Moderate-Sever IBD اللي ما بتستجيب على مجموعه ال TNF@antagonist

□ Natalizumab

monoclonal antibody against the alpha-4 subunit of integrin molecules

جرعته

IV: 300 mg infused over 1 hour every 4 weeks; discontinue if therapeutic benefit is not observed within initial 12 weeks of therapy

أشهر SE لل Natalizumab

Increases the risk of progressive multifocal leukoencephalopathy (PML), an opportunistic viral infection of the brain that usually leads to death or severe disability

في بعض ال Risk اللي بتزود فرصة حدوث ال PML مع ال Natalizumab

زي انه المريض سبق ومشى ع Immunosuppression drug

او المريض عنده anti-JC virus antibodies

او المريض حيمشي ع ال Natalizumab لفترة طويلة

عشان هيك أي مريض رح يمشي ع هاد الدوا لازم يتابعه ال Mental Status

ولو صار أي تغيير بال mental status بينعمل للمريض

(MRI / Lumber puncture) cerebrospinal fluid analysis for JC viral DNA are recommended

تاني SE لل natalizumab هو ال Hepatotoxicity

وكمان بيزود ال Risk of Infection

□ Avoid Combination between Natalizumab and TNF@Antagonist or Immunosuppression drug

□ Vedolizumab

monoclonal antibody that binds to the alpha4beta7 integrin and blocks the interaction of alpha4beta7 integrin with mucosal addressin cell adhesion molecule-1 (MAdCAM-1) and inhibits the migration of memory T-lymphocytes across the endothelium into inflamed gastrointestinal parenchymal tissue

ال Vedolizumab ميزته انه ما بيعمل PML

جرعته :

IV: 300 mg at 0, 2, and 6 weeks and then every 8 weeks thereafter.

Discontinue therapy in patients who show no evidence of therapeutic benefit by week 14.

SubQ : Maintenance: 108 mg once every 2 weeks beginning after at least 2 IV infusions; administer .in place of next scheduled IV dose and then every 2 weeks thereafter

وهيك خلصنا كل الادويه اللي بتستخدم في علاج ال IBD

البوست القادم ان شاء الله رح نشوف ال

Guideline Managment of Mild-Moderate U.C

#لعلِّي أفيدك ؟

الهدف من علاج ال UC إنني أبطأ او اقلل ال Inflammation وأخلي المريض بحالة Remission بدون Symptom وتبدأ ال Mucosa يصير لها Healing ...

□ Induction

□ Maintenance

لمنع ال Relapse ونخلى المريض ب Long Remission

□ Remission كيف نعرف انه المريض وصل لل

ECCO Guidelines 2017 حسب ال 

Remission: stool frequency ≤ 3 /day, no rectal bleeding, and normal mucosa at endoscopy. Quiescent .UC: no inflammation histologically

ACG 2019 حسب ال

Remission : Mucosal healing (No inflammation)

& Mayo endoscopic subscore 0 or 1

Use Fecal calprotectin (FC) if endoscopy is not available

لو كانت ال FC اقل من 100mcg/g معناه صار remission لل Mucosa وبنكمل مع المريض maintenance او بنعمل deescalation

لو ال FC قیمتہ 250mcg/g-100 بیكون فی تحسن جزئی

No Remission ←← 250 FC أكثر من

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

اهم شيء بال Management لل UC نعرف ال Severity للمرض ووين واصل

Sever و moderate و mild هل الحالة

وشفنا ال Scores اللى من خلالها بنعرف ال Severity degree

ذی ال

Mayo UC score□

□Ulcerative Colitis Endoscopic Index of Severity (UCEIS)

□ACG Ulcerative Colitis Activity Index (2019)

Truelove and Witts & Modified Truelove and Witts (AGA 2020)

(مرفقين مع الصور)

هل ماخذ ال Rectum يسر و ينسميه Proctitis

ولو كان واصل لحد ال Splenic flexure وينسميه بهلحالة Left sided Colitis

Extensive Colitis و ينسميه Splenic flexure ال ولا معدى

فحسب ال location / Severity يحدد العلاج المناسب

□□□□□□□□□□

حنبداً مع علاج أول نوع :

لو أجانا مريض UC وحسبنا له ال Score وطلع Mild

فمثلا لو حنعمد ع ال Truelove score

وكانت ال bowel movment اقل من 4 مرات باليوم

Normal ESR و عندہ Systemic manifestation وبدون

Mild فہنا بیکو ن

وہ بال Endoscop کان ال Inflammation موجود ہے بال Rectum

فهل حالة بنسمة

.. Mild - Moderate Ulcerative Proctitis

Induction : بشكل عام عنا ثلاث خيارات لل

1 Topical 5 aminosalicylic acid (5ASA) best choice

2□Oral 5ASA (not Preferred)

3]start from the First with Combination of Oral/Topical 5ASA

كقاعدة ال Topical Corticosteroid يعتبر ضعيف ك Induction agent ومعظم ال Guideline بت Avoid it الا في حالات معينة زي ما حنشوف ...

يبقى طالما ال Inflammation موجود بال Rectum ويس

فأفضل شيء هو استخدام ال Topical 5ASA

فكل ال Guidelines اتفقت انه في حاله ال mild Proctitis بنعطى المريض

□ 1g 5ASA Once daily Suppository at mid Night as a First Line

فحيمشي المريض ع ال ASA Supp ونتابعه

لو خلال اسبوعين ولسه ما في استجابة بنخلية ياخذ ال supp مرتين في اليوم وبتابعه

لو بعد اربع اسابيع ولسه ما في Response بندخل على ال Second line

وال 2ed line بتختلف من Guideline للتاني :

٤ حسب ال TORONTO 2015 : لو المريض ما استجاب على ال 5ASA

فيهلحاله بيعطو ال Topical Corticosteroid زي ال

Hydrocortisone Supp 1 gm daily

٤ حسب ال ECCO 2017 وال NICE 2019

ال 2ed line هو انه نعمل Combination بين ال

(®Topical 5ASA + Oral 5ASA at a dose ≥ 2.4 g/d (as Pentasa

طيب اخذ المريض ال 1st line او ال 2ed line وتحسن

فحنمشيه ع Maintenance therapy

هل كل مرضى ال Ulcerative Proctitis بيحتاجو نمشيهم ع maintenance

Patients with ulcerative proctitis and ≤ 1 flare per year that responds to topical mesalamine do not require maintenance therapy, because such patients often have long-term remission without a relapse. If a relapse does occur, symptoms typically resolve quickly with topical mesalamine therapy.

□The following patients generally require maintenance therapy

●Patients with ulcerative proctitis and >1 disease flare per year

●All patients with ulcerative proctosigmoiditis

●All patients with ulcerative colitis proximal to the sigmoid colon (ie, left-sided colitis and extensive colitis) ف لو كان المريض proctitis ويصيرله Relapse اكثر من مره بالسنة فييلزمه يمشي ع Maintenance therapy

غالبا بيمشي ع Topical 5ASA لو خلال ال Induction استجاب عليه

اما لو خلال ال Induction احتاج Combination من ال

Topical + Orally 5ASA

فيمشي عليهم خلال ال Maintenance

MAINTENANCE guideline for : mild to moderate PROCTITIS

□TORONTO 2015 & ACG 2019

1 gram ASA Supp at night

□ECCO 2017

3 g/week rectal 5ASA

لكن الافضل يمشي المريض فتره على 1g/day وبعدها ممكن كل اسبوع ياخذ 3g لمنع ال Relapse

□ NICE 2019

ال Nice اعتمدت على اعطاء المريض نفس العلاج اللي استجاب عليه خلال ال Induction

فلو استجاب ع Supp حنكمل ع supp

لو استجاب ع Combination من ال Oral/Topical 5ASA بيكمل عليهم ك Maintenance

□□□□□□□□□□□□□□□□

طبيب فرضا المريض عنده Allergy من ال 5ASA من البداية

بہلحالہ بنسخدم ال Topical Corticosteroid

فیبدا ب

Hydrocortisone 1gm supp once daily

وبنتابعه خلال اسبوعين

لو ما تحسن بنزوده ل 1gm twice Daily لمدة 4 اسابيع

واقصى مدة لاستخدام ال Topical Corticosteroid هي 8 اسابيع

البوست القادم ان شاء الله رح نكمل مع ال

Mild Moderate Left sided Colitis & Proctosigmoiditis

#لعلي_أفيدك ؟

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mild-moderate Proctitis Induction from different Guideline

- 1- Toronto 2015: start with 1g/day 5ASA supp
2nd line: Rectal steroid
- 2- ECCO: 1st line 1g/day Rectal 5ASA
2nd line: 5ASA Topical + oral 5ASA
3rd line: Topical Steroids
- 3- ACG 2019: 1g/day of Rectal 5ASA
- 4- NICE: 1st line 1g/day of Rectally 5ASA
2nd line: 5ASA orally + Topical 5ASA
3rd line: 5ASA supp + 4-8 week Topical /orally Steroids
- 5- AGA 2020: Use 5ASA and avoid Budesonide MMX
5ASA at dose 1g/day supp.

Ulcerative Proctitis management 'upToDate'

Induction: Start with 5ASA supp 1gm
once daily

↓ 2-week

if No Response ↑ ^{frequency} ~~dose~~ of supp to twice

↓ 4 week

if No Response

- use Topical 5ASA + Topical
corticosteroid

↓ 2-4 week

if No Response

- use oral 5ASA +
Topical 5ASA

↓
2-4 week

if No Response

start oral corticosteroid.

if there's Response

Reduce the frequency
to once daily
for Maintenance

3

if patient has a mesalamine allergy



start with hydrocortisone supp for 2 week



if No Response increase the
frequency for twice daily
for 4 week



then Reduce the frequency to once
daily for ≤ 2 week

then discontinue the corticosteroid

limit the duration of Topical corticosteroid
use to ≤ 8 week

Truelove and Witts

	Mild	Moderate to severe	Acute Severe
Bowel movements /day	<4	4-6	≥6 plus at least one sign of toxicity
Blood in stools	±small amounts of blood	Between mild and severe	Visible blood
Pyrexia (>37.8°C)	no	no	yes
Pulse >90 bpm	no	no	yes
Anemia (Hb< 10.5g)	no	no	yes
ESR	≤20	≤30	>30mm/hr
CRP	Normal	≤30	>30



Modified Truelove and Witts (AGA 2020)

	Mild	Severe	Fulminant
No. of stools/d	<4	>6	>10
Blood in stool	Intermittent	Frequent	Continuous
Temperature, °C	Normal	>37.5	>37.5
Pulse, beats/min	Normal	>90	>90
Hemoglobin	Normal	<75% normal	Transfusion required
Erythrocyte sedimentation rate, mm/h	≤30	>30	>30
Colonic features on radiograph	None	Air, edematous wall, thumbprinting	Colonic dilation
Clinical signs	None	Abdominal tenderness	Abdominal distention and tenderness



Mayo UC score

Criteria	Score	Criteria	Score
STOOL FREQUENCY		MUCOSAL APPEARANCE by endoscopy	
■ Normal	0	■ Normal	0
■ 1-2 stools/day more than normal	1	■ Mild disease (erythema, decreased vascular pattern, mild friability)	1
■ 3-4 stools/day more than normal	2	■ Moderate disease (marked erythema, absent vascular pattern, friability, erosions)	2
■ 5 or more stools/day more than normal	3	■ Severe disease (spontaneous bleeding, ulceration)	3
RECTAL BLEEDING		PHYSICIAN GLOBAL ASSESSMENT	
■ None	0	■ Normal	0
■ Streaks of blood with stool less than half the time	1	■ Mild disease	1
■ Obvious blood with stool most of the time	2	■ Moderate disease	2
■ Blood alone passed	3	■ Severe disease	3

Ulcerative Colitis April 2020. Ayman Alsebaey, MD

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Ulcerative Colitis Endoscopic Index of Severity (UCEIS)

Descriptor	Likert scale anchor points	Definitions
Vascular pattern	0 = normal	Normal vascular pattern with arborizations of capillaries clearly defined
	1 = patchy obliteration	Patchy obliteration of vascular pattern
	2 = obliterated	Complete loss of vascular pattern
Bleeding	0 = none	No visible blood
	1 = mucosal	Spots or streaks of coagulated blood on the mucosa surface, which can be washed off
	2 = luminal mild	Some free liquid blood in the lumen
	3 = luminal moderate or severe	Frank blood in the lumen or visible oozing from the mucosa after washing or visible oozing from a hemorrhagic mucosa
Erosions and ulcers	0 = none	Normal mucosa, no visible ulcers or erosions
	1 = erosions	Small defects in the mucosa (≤ 5 mm), white or yellow, flat edge
	2 = superficial ulcer	Larger defects in the mucosa (> 5 mm), discrete fibrin covered, remain superficial
	3 = deep ulcer	Deeper excavated defects in the mucosa, with a slightly raised edge

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ACG Ulcerative Colitis Activity Index (2019)

	Remission	Mild	Moderate-severe	Fulminant
Stools (no./d)	Formed stools	<4	>6	>10
Blood in stools	None	Intermittent	Frequent	Continuous
Urgency	None	Mild, occasional	Often	Continuous
Hemoglobin	Normal	Normal	<75% of normal	Transfusion required
ESR	<30	<30	>30	>30
CRP (mg/L)	Normal	Elevated	Elevated	Elevated
FC (mg/g)	<150–200	>150–200	>150–200	>150–200
Endoscopic Mayo subscore	0–1	1	2–3	3
UCEIS	0–1	2–4	5–8	7–8
CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; FC, fecal calprotectin; UCEIS, Ulcerative Colitis Endoscopic Index of Severity.				

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Simple Clinical Colitis Activity Index

Symptom	Score	Symptom	Score
Bowel frequency (d)		Blood in stool	
1–3	0	None	0
4–6	1	Trace	1
7–9	2	Occasionally frank	2
9+	3	Usually frank	3
Bowel frequency (night)		General well-being	
0	0	Very well	0
1–3	1	Slightly below par	1
4–6	2	Poor	2
Urgency of defecation		Very poor	3
None	0	Terrible	4
Hurry	1	Extracolonic features	1 per manifestation
Immediate	2		
Incontinence	3		

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(Management Guidelines for Mild-Moderate Left Sided Extensive Colitis (LSEC

زي ما اتفقنا علاج ال UC بيعتمد mainly على ال Severit للمرض ووين واصل (Affected area) وشفنا ال Scores اللي بنعتمد عليها لتحديد ال Disease Severity

وبدأنا ال Proctitis Managmeng وكان العلاج بيعتمد Mainly على ال 5ASA suppository وشفنا شو ال 2ed line في حال فشلت ال 5ASA supp

اليوم ان شاء الله حنشوف لو كان ال Inflammation معدي ال Rectum وواصل لل Splenic Flexure وبنسمي هلحالة

Left Sided Extensive Colitis (LSEC) Induction□

٤ حسب ال TORONTO 2015:

اعتمدت في علاج ال LSEC على ال 5ASA Rectal enema بجرعه من 1-4 جرام في اليوم او نبدأ ب Combination وهو ال preferred Option $\geq 1 \text{ g/d}$ 5ASA rectal enema + oral 2 - 4.8g ASA

وكانت ال recommendation لتجنب استخدام ال Topical steroid

٤ حسب ال ECCO 2017

بردو كان الاعتماد ع ال Combination therapy

$\geq 1 \text{ g/d}$ 5ASA rectal enema + oral $\geq 2.4 \text{ g}$ ASA

٤ حسب ال ACG 2019

اما بنبدأ ب Rectal enema of 5ASA بنفس الجرعات السابقه او نمشي مع ال Preferred option ونعطي Combination $\geq 1 \text{ g/d}$ rectal enema + $\geq 2 \text{ g}$ oral ASA

وبردو نفس ال TORONTO 2015 وصت بتجنب ال Topical Steroid

وفي حال ما في Response بندخل ع ال 2ed line

اللي هو ال Budesonide MMX بجرعه 9 mg في اليوم ...

٤ حسب ال NICE

First line : $\geq 1 \text{ g/d}$ 5ASA rectal enema

If No response ↓

Second Line : ≥ 1 g/d 5ASA rectal enema + High dose of ASA 4.8 g/day

If No Response ↓

Third line :
High dose of 5 ASA + 4-8 Week with Topical Steroid

If No Response ↓

Fourth Line :

High Dose Oral 5ASA + 4-8 week oral Steroid

AGA 2020 حسب ال ٤

First line : ≥ 1 g/d 5ASA rectal enema

Second Line :
 ≥ 1 g/d 5ASA rectal enema + Standard dose of Mesalamine 2-3 g/day

Third Line : Try Rectal Steroid (not preferred)

Fourth Line : use oral Corticosteroid
(Budesonide MMX or Prednisolone

ف الخلاصه لو حنعمل Induction افضل شي ك First line هو ال Combination بين ال 5ASA ال Topical/orall
فبنعطي ال 5ASA Enema ومعنا لحد 4 جرام في اليوم
مع ال Oral mesalamine بجرعه تتراوح من 2.4-4.8g في اليوم

ولو ما في Response بندخل ع ال 2ed line وهو ال Oral corticosteroid
زي ال Budesonide بجرعه 9mg في اليوم ولو ما في استجابته بنلجأ لل Prednisolone بجرعه 40 mg في اليوم

For patients whose symptoms do not improve with budesonide MMX, we discontinue budesonide MMX and initiate systemic glucocorticoid therapy with prednisone.

Oral prednisone is started at a dose of 40 mg daily, and we typically begin to taper prednisone after one week of high-dose therapy. However, some clinicians continue high-dose glucocorticoid therapy for up to four weeks prior to initiating a taper.

We generally taper prednisone by either 5 mg or 10 mg increments on a weekly basis for a total duration of four to eight weeks of therapy. For patients who have been treated with glucocorticoids for greater than three months, a slower taper may be needed to avoid adrenal insufficiency

طبيب عملنا Induction ودخل المريض ب Remission ٥٤

حنكمل معه ك Maintenance

وحتكون برود combination therapy بين ال oral وال Topical mesalamine □

Conclusion: left sided colitis :-

Induction :

1st line is to use combination between Topical
5ASA enema at dose $\geq 1\text{g/day}$
plus orally 5ASA at a dose vary from
2.4- 4.8 g/day

↓
if No Response

shift to orally corticosteroid

start with Budesonide MMX for 8 week
at a dose 9mg/day then stop it
without tapering

Some guideline suggest another course of Budesonide
if Relapse occur ≥ 8 week after stopping it
and if No Response shift to

↓

Prednisolone 40mg/day

Maintenance: Combination therapy between
oral and Topical mesalamine.

ulcerative proctosigmoiditis

Start with 5ASA

enema



if No Response

↑ frequency to
twice daily

or add enema
+ supp

Mesalamine allergy

use corticosteroid
foam or enema

↓ 2 week

if No Response

↑ the frequency
to twice daily



then decrease the
frequency $\leq$ 2 week

* if the patient can't tolerate Topical
Preparation $\rightarrow$ start with oral 5ASA

Management Guideline of mild-Moderate Extensive Ulcerative Colitis

لو كان ال Inflammation ماخذ ال Rectum وال Sigmoid وال descending Colon ومعدى ال Splenic Flexure هاي الحالة بنسميها Extensive UC معظم ال Guideline اتفقت انو بهلحاله العلاج Mainly هيكون oral therapy لانه أي Enema آخرها توصل لحد ال Splenic Flexure لكن في بعض ال Guide الجديده لاحظو انه المرضى اللي اخدو Combination therapy من ال Oral 5ASA وال Mesalamine enema استفادو وكان في Good Response ف ال Combination ممكن يكون Option كويس ... لكن بشكل عام ال Main line of ttt هيكون ال Oral therapy عشان يغطي كل المناطق اللي ... Affected

Induction Therapy for mild - Moderat Extensive UC

TORONTO 2015

حسب ال Toronto خط العلاج الاول في حالات ال Extensive هو ال Oral mesalamine بجرعه من 2-4.8 g في اليوم ... ولو ما كان في Response بنشفت ع ال 2ed line وهو ال Oral Steroid زي ال Budesonide MMX

ECCO 2017

ال ECCO كانت من ال Guides اللي بتشجع باعطاء ال Combination ك First line .. فهيبدا المريض ب 1gm من ال 5ASA Enema ومعنا لحد 4g وبنضيف عليه ال oral 5ASA بجرعه 2.4-4.8g

ولو صار Fail بنشفت ع ال 2ed line اللي هو ال Oral Steroid

ACG 2019

ال first line هو اعطاء ال Oral 5ASA بجرعه اكبر من 2g ولو ما استجاب المريض switch to oral Budesonide MMX + Oral 5ASA

NICE 2019

ال Nice guideline دايما مع اعطاء ال High dose of 5ASA وكان رأيهم زي ال ECCO باعطاء ال Combination

(≥ 1 g/d 5ASA rectal enema + high dose 5 ASA (>3 g) response ف ال 2ed line ولو ما في

.high dose of 5ASA + 4-8week oral steroids

٤ حسب ال Toronto وال NICE وال ECCO وال ACG كلهم اتفقوا انه في حاله ال Mesalamine oral ما جاب نتيجته بنشفت على ال Steroid لكن ال AGA كان رأبها مختلف لحد ما ..

AGA 2020

حسب ال AGA اول شي بنبدأ مع المريض ب

1st line : standard dose Mesalamine (2-3 g) or diazo bonded 5ASA

لو المريض لسه ما وصل لل Remission بنعمل Combination

(2ed line : ≥ 1 g/day of 5-ASA rectal enema +standard dose mesalamine (2-3g

في حال ما استجاب المريض فهنا ال AGA اعطت فرصه ثانيه لل 5ASA بإنه نرفع الجرعه لل High dose ونشوف استجابته المريض

(3ed line : ≥ 1 g/d ASA rectal enema +high dose mesalamine (> 3 g/d

لو ما استجاب ف آخر Choise هو ال steroid

4th line : Switch to Oral steroid (Budesonide MMX)

If no Response Shift to Prednisolone

وقت ما يوصل المريض لل Remission بنكملة ع Maintenance

Maintenance of Therapy for mild - Moderat Extensive UC

Oral 5ASA At adose >2 gm

(المفترض جرعه ال Mesalamine ما تقل عن 2.4 سواء Induction او (maintenance

Note : Dont use systemic corticosteroids for maintenance of remission

هيك خلصنا ال Mild- moderate بكل انواعه

البوست القادم ان شاء الله رح نبدأ بال Moderate- Sever UC

#لعلي أفيدك ٤

... Management Guideline for Moderate-Sever IBD

بمجرد حسبنا ال IBD score وطلع المريض Moderate-Sever IBD
ببداً ال Induction ب Aggressive Therapy بغض النظر عن ال Site
ف علاج ال Moderate-Sever IBD مش حنعمد فيه ع ال Site of Inflammation □ وين ما كان ال Site العلاج رح يكون
نفس الشئ

وهنا ال 5ASA ملهاش Role واستخدامها ضعيف
عشان هيك ال Induction بيكون اما بال Steroids او بال Biological Agent ...

خلينا نشوف اغلب ال Guideline step في ال .. Induction

: □ TORONTO 2015

ال Toronto بيستخدمو ال Steroid ك First Line □

فبيبدأ المريض على ال 9 mg Budesonide او ال Prednisolone

لو ما في Response على ال Budesonide بندخل ع ال 2ed line اللي هو ال Biological agent مع ال Thiopurine

واستخدام ال Thiopurine مع ال Biological Agent بيكون بهدف منع تكوين اجسام مضاده لل Biological agent ونمنع
ال Resistance من ال Biological agent

□2ed line : AntiTNF(eg: Infliximab) + thiopurines or methotrexate

ولو ما استجاب المريض فبنلجأ لل Vedolizumab ك Third line□

: □ECCO 2017

ال 1st line □ : هو ال oral steroid نفس ال Toronto

من توصيات ال ECCO انه لو فشل ال Oral Steroid ممكن نلجأ لل IV steroid كمحاولة قبل ما نحرق كرت Biological agent

لانه مريض ال IBD بيصير عنده Resistance ع السريع من ادويته
فلو فشل ال Steroid خالص حتى ال IV ساعتها بندخل ع ال Biological Agent
□2ed line :
AntiTNF + thiopurines

□3ed Line If Failed antiTNF use : Vedolizumab

□ ACG 2019

ACG is AGAINST monotherapy with thiopurines or methotrexate for induction of remission

ال ACG اختلفت عن المجموعات السابقة بأنه ال First line ممكن يكون Steroid او Biological agent

فممكن يبدأ المريض ب Budesonide او ممكن يبدأ بال Infliximab من الاول خالص ..

ولو صار Fail لمجموعه بنشفت للمجموعه الثانيه

فال 1st line ممكن يكون line من التالي :
Budesonide 9 mg/ day or Prednisolone 10

2 Infliximab + Thiopurine

3 Vedolizumab

4 Tofacitinib

وفي حال فشل ال 1st line بنبدل
يعني فرضا مريض مشى ع Budesonide وما استجاب فبندخل ع ال Lines الثانيه :
Infliximab / Vedolizumab / Tofacitinib ...

□ NICE 2019 :
1st Line : oral steroids + thiopurines.
2ed Line : Infliximab
3ed line : Vedolizumab
4th line : Tofacitinib

: □ AGA 2020
ال AGA قالت ننسى ال steroid خالص ونبدأ بال Biological agent ك 1st line

AGA dont Recommend Steroid in moderate- Severe IBD Induction
وحنبدأ ع ال Line التاليه :

AntiTNF ± thiopurines or methotrexate

Or

Vedolizumab ± thiopurines or methotrexate
Or

Tofacitinib (clinical trial) as 1 line or after failed
AntiTNF

Or

Ustekinumab ± thiopurines or methotrexate as 1st line or after failed AntiTNF

والافضل دائما انه نبدا بال Infiximab ولو فشل نشوف ال Lines الثانيه ..

□□□□□□□□□□□□□□□□

طبيب مشينا المريض ع Induction ووصل لل Remission

کیف حنکمل معه ? Maintenance ?

Maintenance Therapy for Moderate- Severe IBD

باختصار لو المريض مشى ع Steroid خلال ال Induction

فحتمشیه علی ال Thiopurine ك Maintenance

Induction ك Biological Agent ع ولو المريض مشى

هيكمل عليه ك maintenance

□ If Steroids Used as induction use thiopurines as Maintenance

□IF AntiTNF used as Induction: continue on the same antiTNF

... Remember : Steroid Not Used as Maintenance

جرعات الـ Biological agent والـ thiopurine شرحناهم بالتفصيل بالبوستات السابقة ٩٩

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#لعلي أفيدك ؟

لما تبدأ بال Steroid
Induction ك

In
Moderte_Sever
IBD

وميحصلش
استجابة ↓

Use Infliximab

Management Guideline for hospitalized acute severe UC

مريض ال Sever Ulcerative colitis هيجي بالاعراض التالية :

● Bloody stool frequency ≥ 6 per day

● PLUS at least one of the following characteristics (ie, evidence of systemic toxicity):

• Fever (temperature ≥ 37.8 degrees C)

• Tachycardia (heart rate ≥ 90 beats/minute)

• Anemia (hemoglobin < 10.5 g/dL [105 g/L])

(• Elevated inflammatory marker (eg, C-reactive protein, erythrocyte sedimentation rate

٤ في قواعد عامة لأي مريض ... Sever Ulcerative Colitis

(1 Test for C. difficile infection (CDI

ولو طلع المريض عنده CDI بنستخدمه ال Oral Vancomycin

2 Avoid NSAIDs drug & anticholinergic drug

3 Avoid Narcotics

لأنها بتقلل ال GI motility وبتزود فرصه ال .. Sepsis

4 Don't Give TPN Unless patient can't tolerate Oral feeding

5 Give Anticoagulant

مريض ال Sever Acute UC بيكون عنده Hypercoagulopathy

فبنعطى Heparin او LMWH ك Prophylaxis

6 AGAINST broad spectrum antibiotics unless there's Indication for using it as pneumonia or other Infection

ال Broad spectrum Antibiotics بيزود ال Risk لل

C.difficile

.....

كيف بنعالج مريض ال Sever Acute UC ...

بشكل عام اغلب ال Guideline اتفقو انه بدايه ال Induction تكون ب Steroid ولو ما صار Response خلال 3 ايام بيتشففت

- History of seizure disorders.

●Low serum total cholesterol (<120 mg/dL [3.11 mmol/L]).

●Low serum magnesium level.

●Low serum albumin (<2.3 g/dL [23 g/L]) [34].

●Prior intolerance or failure of immunomodulator therapy (eg, azathioprine).

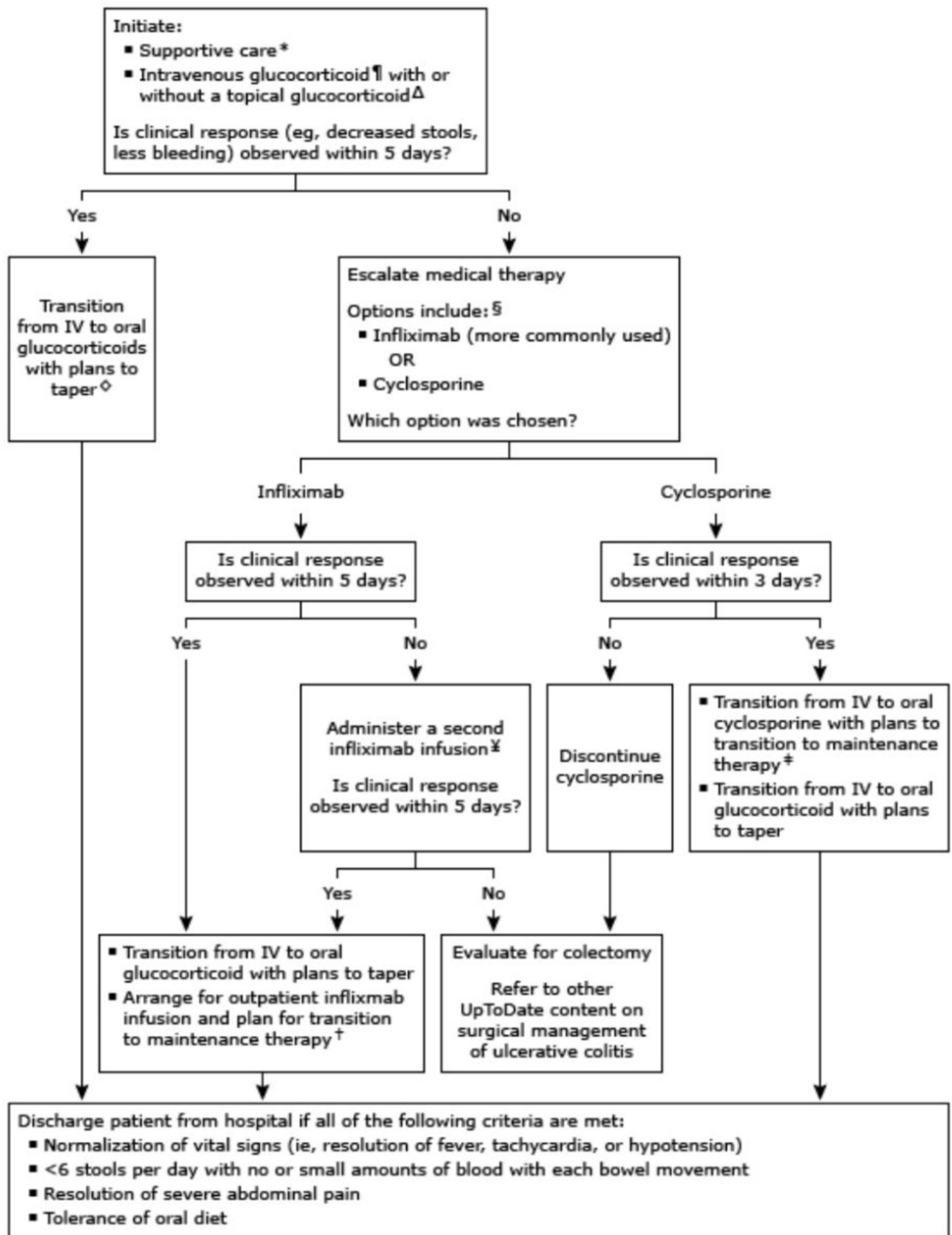
●Prior failure of biologic agent (eg, infliximab)

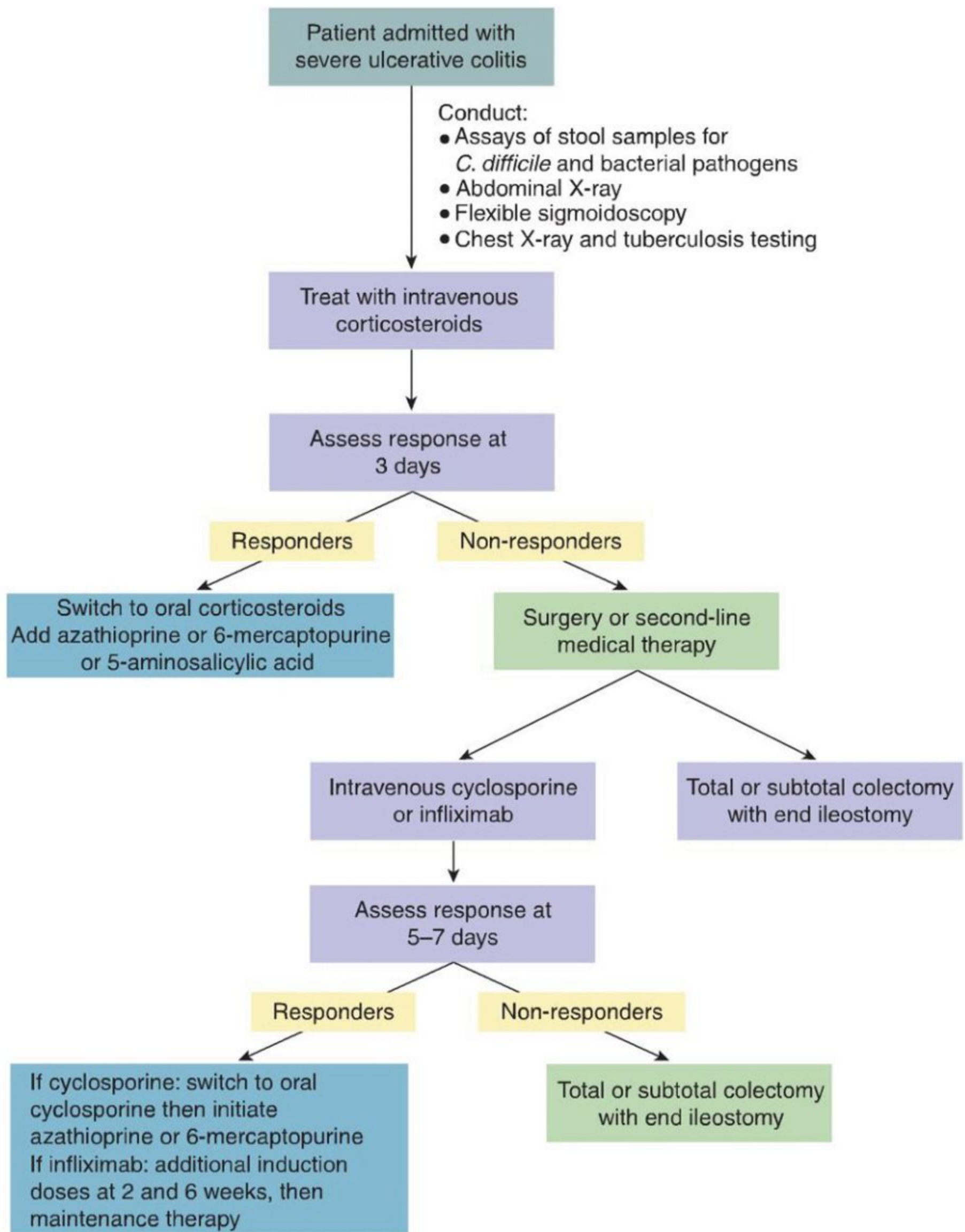
●Inability to comply with dosing and monitoring requirements while on cyclosporine

Crohns Disease Management وهيك بنكون خلصنا ال Ulcerative colitis management ☐ ورح نبداً ان شاء الله بال Crohns Disease Management
Guideline

#لعللي أفيدك ☐

Inpatient management for adult patients with severe ulcerative colitis





□Patients with COVID-19 & IBD

Covid+ IBD ↓ مين الأدوية اللي لازم تتزبط لو المريض

Source : UpToDate

Adjusting IBD medications — Adjustments to medication regimens in patients with IBD with suspected or known COVID-19 should be individualized based on the severity of infection ,patient comorbidities, and the existing medication regimen, while balancing the risk of disease flare

Expanding indications for SARS-CoV-2 testing (eg, screening prior to endoscopy) may result in increased identification of asymptomatic patients who are infected

The goal of medication adjustment is to reduce immunosuppression during active viral infection to lower the risk of COVID-19-related complications (eg, pneumonia) . Our overall approach for patients with IBD in remission includes

●Therapies that can be continued without interruption:

•Budesonide

•Aminosalicylates, including sulfasalazine

•Topical rectal therapy (eg, topical glucocorticoid)

•Antibiotics

□●Therapies that may require temporary adjustment:

□Systemic glucocorticoids – The approach to adjusting glucocorticoids depends on the severity of COVID-19:

-For patients with nonsevere COVID-19 (eg, outpatient status) – Reduce dose of systemic glucocorticoid (eg, prednisone dose to <20 mg daily) or transition to oral budesonide.

Although systemic glucocorticoids convey an increased risk of infection and are a potential risk factor for developing severe COVID-19 abrupt discontinuation is not possible, and patients should receive the lowest required dose for the shortest period of time necessary to minimize adverse reactions

For patients who present with or progress to severe COVID-19 (ie, oxygen requirement) – Continue systemic glucocorticoids without tapering in the setting of COVID-19. The decision to continue systemic glucocorticoids has been informed by data suggesting that low-dose dexamethasone has a role in the management of severe COVID-19.

□Immunomodulators – Hold thiopurines (ie, azathioprine, 6-mercaptopurine) and methotrexate for patients with active symptoms of COVID-19 until symptoms resolve.

□Tofacitinib – Consider holding or reducing dose of tofacitinib (eg, 5 mg twice daily) for patients with active symptoms of COVID-19 until symptoms resolve.

Tofacitinib, a small molecule Janus kinase inhibitor, has been associated with an increased risk of other viral infections (ie, herpes zoster infection), and its mechanism of action is to suppress T-cell function

□Biologic agents – Consider delaying biologic therapy (anti-TNF agents, ustekinumab, or vedolizumab) for patients with active symptoms of COVID-19 until symptoms resolve.

Resumption of therapy — The optimal time to resume immunosuppressive medications after SARS-CoV-2 infection is uncertain, while expert consensus has stated that medications (eg, biologic therapies) that were held during symptomatic infection can be resumed after resolution of symptoms [40].

Preliminary data suggested that induction therapy for active ulcerative colitis in the setting of recent mild COVID-19 was not associated with an increased risk for progressing to severe infection. In a case report of a 54-year-old female patient with mild COVID-19 and active ulcerative colitis, treatment with infliximab at weeks 6 and 7 following the diagnosis was associated with achieving clinical remission and recovery from COVID-19

Management of Inflammatory Bowel Disease During the COVID-19 Pandemic



Patients with IBD should continue IBD therapies and infusions.



Having IBD doesn't appear to increase the risk of SARS-CoV-2 infection or development of COVID-19.



Instructions for IBD patients who develop COVID-19 (fever, respiratory symptoms, digestive symptoms):

- a. Stop thiopurines, methotrexate, tofacitinib.
- b. Stop biological therapies (including anti-TNF, ustekinumab, vedolizumab).
- c. Can restart therapies after complete resolution of COVID-19 symptoms.



Patients with IBD – speak with your health care team before stopping any medication



Submit cases of IBD and confirmed COVID-19 to the SECURE-IBD registry at COVIDIBD.org.

Source: Rubin DT, Feuerstein JD, Wang AY, Cohen RD, AGA Clinical Practice Update on Management of Inflammatory Bowel Disease During the COVID-19 Pandemic: Expert Commentary, *Gastroenterology* (2020)

(Management of Crohn's Disease (CD

مرض ال Crohns باعتباره Aggressive عن ال UC عشان هيك العلاج لازم يكون Aggressive لمنع ال Complication ..
زي ما قلنا في البوستات السابقة ال CD بيبدأ ب Inflammation بال Layers of GI ويكون المريض عنده
Abdominal pain + diarrhea

وبعدها ينتقل للمرحله الثانيه ،فأى Inflammation بيعمل Fibrous Tissue وبيعمل Strictures و Obstruction

وساعات ال Severity of Inflammation بيعمل Breakdown لل Intestinal Tissue وبيعمل تجايف بين ال GI او بين ال
GI وال Urinary bladder او بين ال GI وال Vagina
اللي بنسميها Fistula Formation
وهاي ال Fistula حتجيب Discharge حسب المكان اللي الموجوده فيه ...
وال CD بيعمل Abscess ويدخل المريض ب Sepsis

ف عشان هيك لازم العلاج يكون Aggressive لمنع ال Complication

علاج ال CD يعتمد على حاجتين :

Score assessment of Disease

وشفنا ال Scores اللي بنعتمد عليها لتقييم حاله المريض هل هو Sever - Moderate - mid- واشهر هاي ال Scores
Crohn's Disease Activity Index (CDAI)
Harvey Bradshaw index
Simple Endoscopic Score -Crohn's Disease (SES-CD)
Crohn's Disease Endoscopic Index of Severity (CDEIS)
Rutgeerts' score for post resection recurrence
Crohn's disease MRI index

موجودين كلهم ع ال MDCalc app ومرفقين بالصور ...

Risk Assessment

ال AGA قسمت ال CD pt ل High Risk & Low Risk

: Low Risk pt

هو المريض اللي بيتم اكتشاف المرض وعمره اكبر من 30 سنه
وبيكون مش Extended ومعندوش Strictures ولا Fistula وبال endoscopy بتكون ال Ulcer سطحيه Superficial

With no prior surgery

: □High Risk pt

لو المريض تشخص CD وعمره اقل من 30 وكان Extensive
وعامل Fistula او Strictures مع Deep ulcer في ال Endoscopy
With Prioro Surgery

يبقى أي مريض جاي ب CD وحبندأله علاج ،لازم نشوف هل هو mild- moderate- sever وهل هو low risk ولا High risk

□□□□□□□□□□□□□□□□

: General Rule

❖ ال Mesalamine زي ال Pentasa® ملهاش أي دور في علاج ال CD
Don't Use Mesalamine in CD Treatment

٤) ال Sulfasalazine إلهيا دور ضعيف وممكن نبدأ فيها بال Mild cases فقط

ال Steroids ملهاش أي دور في حال وجود Fistula ؟

ف وجود High Risk pt او Fistula formation مش حينفع معهم ال Steroids ولا ال Sulfasalazine وعلاجهم بيكون Biological

هيك بنكون أجملنا أهم نقاط اللي حنمشي عليها خلال ال
Management

البوست القادم ان شاء الله رح نشوف اول نوع وهو ال

Mild-moderate active CD with Low Risk Management

#لعلي أفيدك ؟



Crohn's Disease Activity Index (CDAI)

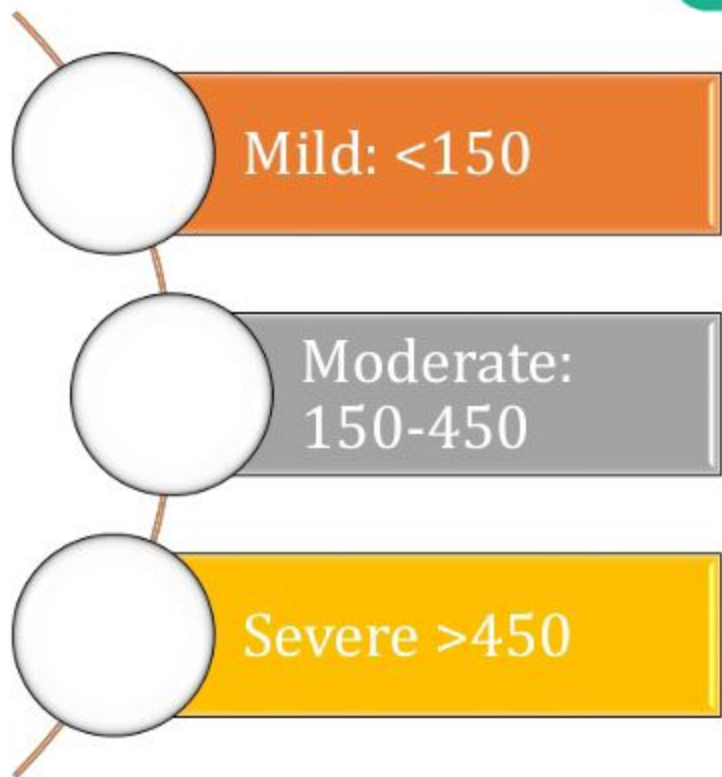
CROHN'S DISEASE ACTIVITY INDEX			
Criteria	Amount	Answer	Multiplier
Number of liquid stools	Sum, past 7 days		×2
Abdominal pain	Average daily rating × 7	0 = None 1 = Mild 2 = Moderate 3 = Severe	×5
General well-being	Average daily rating × 7	0 = Generally well 1 = Slightly under par 2 = Poor 3 = Very poor 4 = Terrible	×7
Extra-intestinal/physical complaints*	Number of complications listed	0 = No, 1 = Yes*	×20
Antidiarrheal drugs	Use in the previous 7 days	0 = No 1 = Yes	×30
Abdominal mass		0 = No 2 = Questionable, 5 = Definite	×10
Hematocrit	Expected – observed hematocrit	Men: 47% observed, Women: 42% observed	×6
Body weight	% below ideal weight	(Ideal - observed) / ideal × 100	×1



Crohn's Disease Activity Index (CDAI)



- **CDAI is commonly used in clinical trials.**
- It requires **answers** from the patients.
- It depends mainly on **symptoms**.
- It is weighted to **diarrhea**.
- **Not useful in post surgery.**
- **Poor correlation with:**
 - Endoscopy.
 - Calprotectin.
 - CRP and ESR

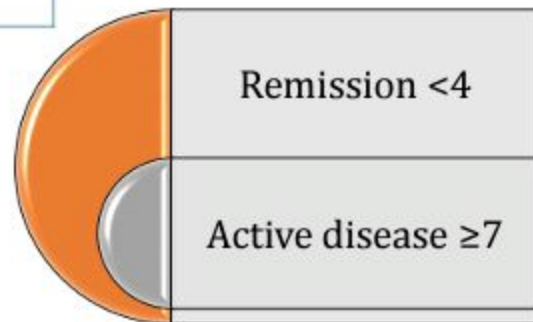


Harvey-Bradshaw index.



HBI- Harvey-Bradshaw index.	
Variable	Scoring
General well-being (0–4)	0 = very well, 1 = slightly below average, 2 = poor, 3 = very poor, 4 = terrible
Abdominal pain (0–3)	0 = none, 1 = mild, 2 = moderate, 3 = severe
Abdominal mass (0–3)	0 = none, 1 = dubious, 2 = definite, 3 = tender
Number of liquid stools	1 per occurrence
Extra intestinal manifestations	One point for each (Arthralgia, Uveitis, Erythema Nodosum, Pyoderma gangrenosum, Aphthous Ulcer, Anal fissure, New Fistula, Abscess)

- **Simple to calculate and measure**
- It is less susceptible to confounding factors relying on clinical parameters.
- **It heavily weighted by diarrhea.**
- It does not correlate with inflammatory markers.

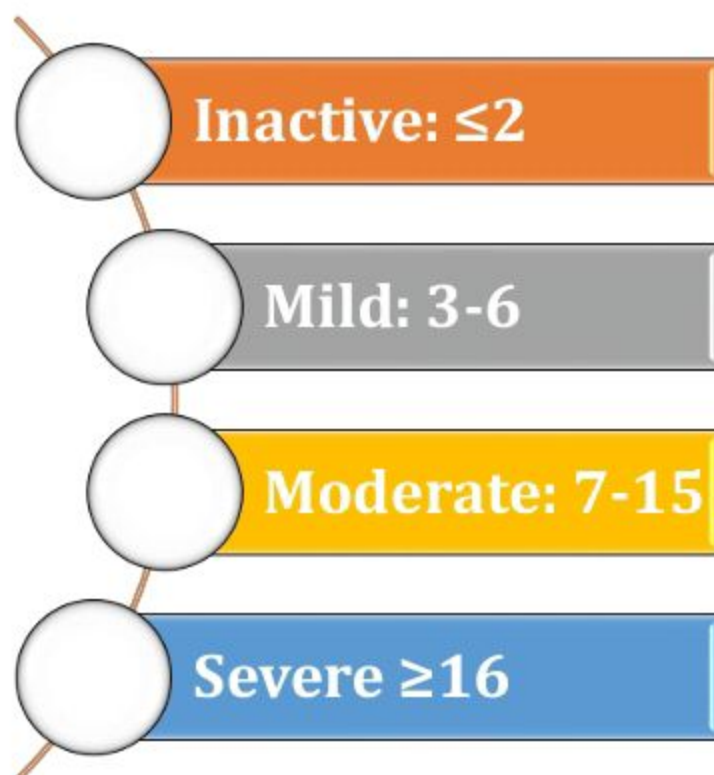


Simple Endoscopic Score - Crohn's Disease (SES-CD)

	Score = 0	Score = 1	Score = 2	Score = 3	
Size of Ulcers	None	Aphthous ulcers (0.1 – 0.5 cm)	Large ulcers (0.5 – 2.0)	Very large ulcers (> 2.0 cm)	
Ulcerated Surface	None	< 10%	10- 30%	> 30%	
Affected Surface	Unaffected segment	< 50%	50 – 75%	> 75%	
Narrowings	None	Single can be passed	Multiple can be passed	Cannot be passed	
Ileum	Right colon	Transverse colon	Left colon	Rectum	Total
Value	▪ Mild endoscopic activity: altered vascular pattern and erythema or edema. ▪ Moderate endoscopic activity : erosions or superficial ulcers taking up >10% but less than 30% of the surface area ▪ Severe disease: large ulcers >2 cm				



Simple Endoscopic Score - Crohn's Disease (SES-CD)



Crohn's Disease Endoscopic Index of Severity (CDEIS).

	Rectum	Sigmoid and Left Colon	Transverse Colon	Right Colon	Ileum	Total
Deep ulceration (12 if present in the segment, 0 if absent)	0	0	0	0	0	0
Superficial ulceration (6 if present in the segment, 0 if absent)	0	0	0	0	0	0
Surface involved by the disease (cm)	0	0	0	0	0	0
Ulcerated surface measured (cm)	0	0	0	0	0	0
Total 1 + total 2 + total 3 + total 4					=	0
Number (n) of segments totally or partially explored					=	0
Total A divided by n					=	0
3 if ulcerated stenosis anywhere, 0 if not					+	0
3 if non ulcerated stenosis anywhere, 0 if not					+	0
Total score = B + C + D					=	0
						CDEIS



Crohn's Disease Endoscopic Index of Severity (CDEIS).



Rutgeerts' score for post resection recurrence:

Rutgeerts' score.	
Grade	Endoscopic findings
i0	No lesions in the distal ileum
i1	≤ 5 aphthous lesions
i2	> 5 aphthous lesions with normal mucosa between the lesions, or skip areas of larger lesions or lesions confined to ileocolonic anastomosis
i3	Diffuse aphthous ileitis with diffusely inflamed mucosa
i4	Diffuse inflammation with already larger ulcers, nodules, and / or narrowing
Remission: endoscopic score of i0 or i1; Recurrence: endoscopic score of i2–i4.	

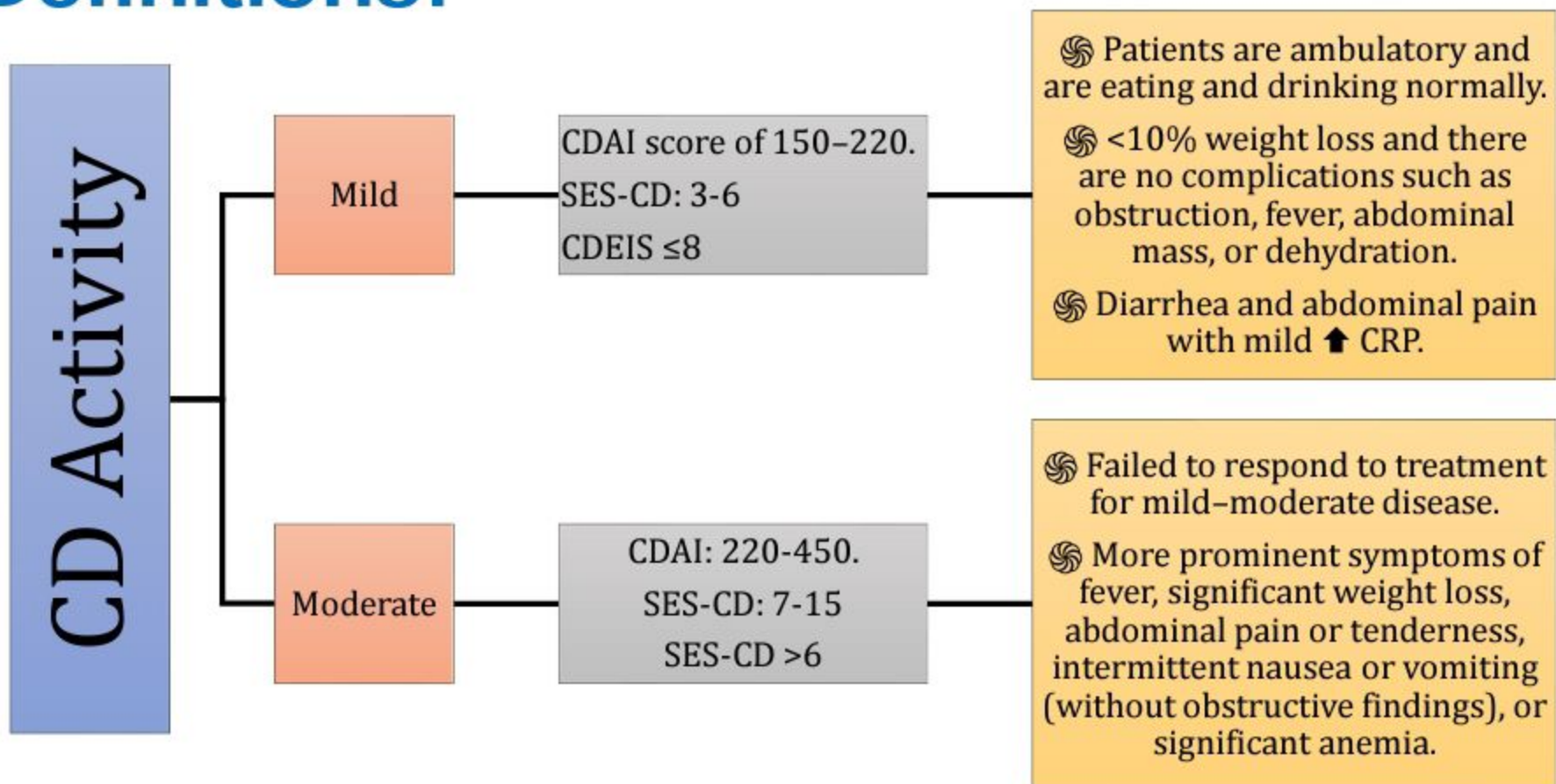


Crohn's disease MRI index

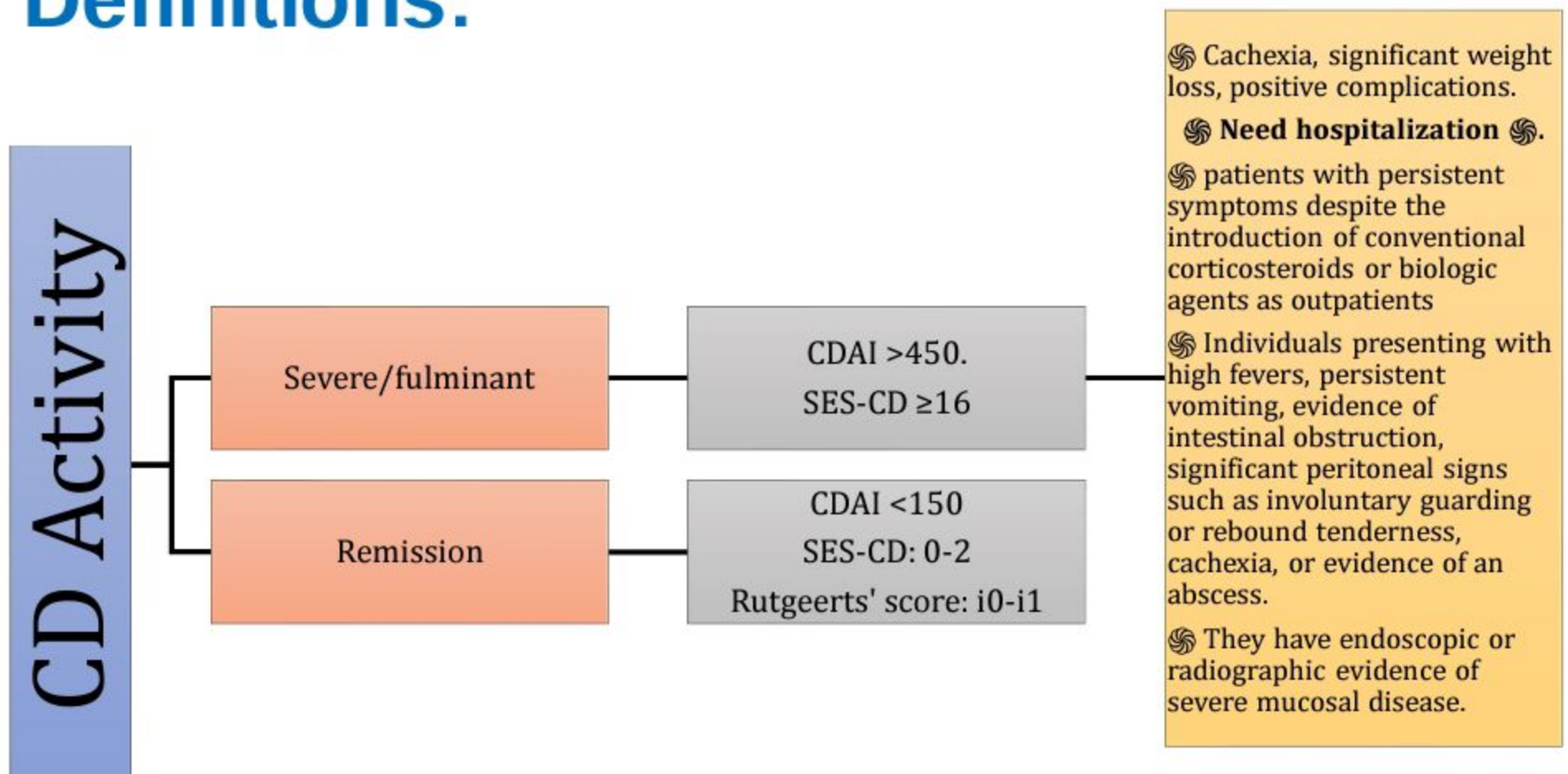
A. Score	0	1	2	3
Mural thickness ^a	1–3 mm	>3–5 mm	>5–7 mm	>7 mm
Mural T2 signal ^b	Equivalent to normal bowel wall	Minor increase in signal-bowel wall appears dark gray on fat-saturated images	Moderate increase in signal-bowel wall appears light gray on fat-saturated images	Marked increase in signal-bowel wall contains areas of white high signal approaching that of luminal content
Perimural T2 signal	Equivalent to normal mesentery	Increase in mesenteric signal but no fluid	Small fluid rim (≤ 2 mm)	Larger fluid rim (> 2 mm)
Mural enhancement pattern	Not applicable	Homogeneous	Mucosal	Layered
Enhancement ^c	Equivalent to normal bowel wall	Minor enhancement: bowel wall signal greater than normal small bowel but significantly less than nearby vascular structures	Moderate enhancement: bowel wall signal increased but somewhat less than nearby vascular structures	Marked enhancement: bowel wall signal approaches that of nearby vascular structures
Lymph nodes	Absent	Cluster < 1 cm	1 node > 1 cm	3 nodes > 1 cm
Lymph node enhancement ^c	Less than nearby vascular structure	Equivalent or greater to nearby vascular structure	Lymph node enhancement ^c	Less than nearby vascular structure
Comb sign	Absent	Present		



Definitions:



Definitions:



The AGA risk stratification for CD

	LOW RISK	HIGH RISK
AGE	>30 years of age at diagnosis	<30 years of age at diagnosis
EXTENT	Limited anatomic involvement	Extensive anatomic involvement
PERIANAL	No perianal or severe rectal disease	Perianal and/or severe rectal disease
BEHAVIOR	No stricturing or penetrating disease	Stricturing or penetrating disease
ENDOSCOPY	Superficial ulcers on endoscopy	Deep ulcers on endoscopy
SURGERY	No prior surgery	Prior surgery

GIT_37 #IBD #Crohns_Disease "CD" #
... Mild-to moderate active CD in low Risk patients

لو مريض CD حسبنا ال Score وطلع Mild- Disease وكان low Risk pt كيف بنبدأه العلاج ك Induction ..

في قواعد عامه اتفقت عليها اغلب ال Guideline زي ال

ACG (American) ,BSG (British) ,CAG(Canadian),ECCO

٤مريض ال CD مش هنستخدمه ال Mesalamine في العلاج
... Oral Mesalamine has no Role in CD

٤ استخدام ال Metronidazol وال Ciprofloxacin ملوش أي دور في علاج ال CD ..

ال Mild CD بتنقسم لنوعين حسب ال Disease Location

□ Crohn's colitis

حسب ال ACG أعطت فرصة لل ASA كبدية في حالات ال Mild قبل ما نلجأ لل Steroid ..
ف أول Choise هو ال Sulfasalazine بجرعه 3-6 جرام في اليوم
لكن الاغلب ضد استخدامه من البدايه لانه Weak ..

اما ال BSG ف ال 1st choise في حالات ال Colitis هو ال Prednisolone بجرعه 40-60mg في اليوم لمدة 8 اسابيع ك
.. Induction

اما ال Canadian فكان ال 1st line إما sulfasalazine او Prednisolone
ولو بدأ المريض ع Prednisolone بنعمله Assessment خلال 2-4 اسابيع وبنشوف هل وصل لل Remission او لا

٤ في حالة وصل المريض لل Remission بيكمل maintenance على ال Thiopurine

٤ في حال موصلش لل Remission بنعتبره CD - Sever - moderate وبنعالجه عهلاًساس ..

□ ileocecal CD

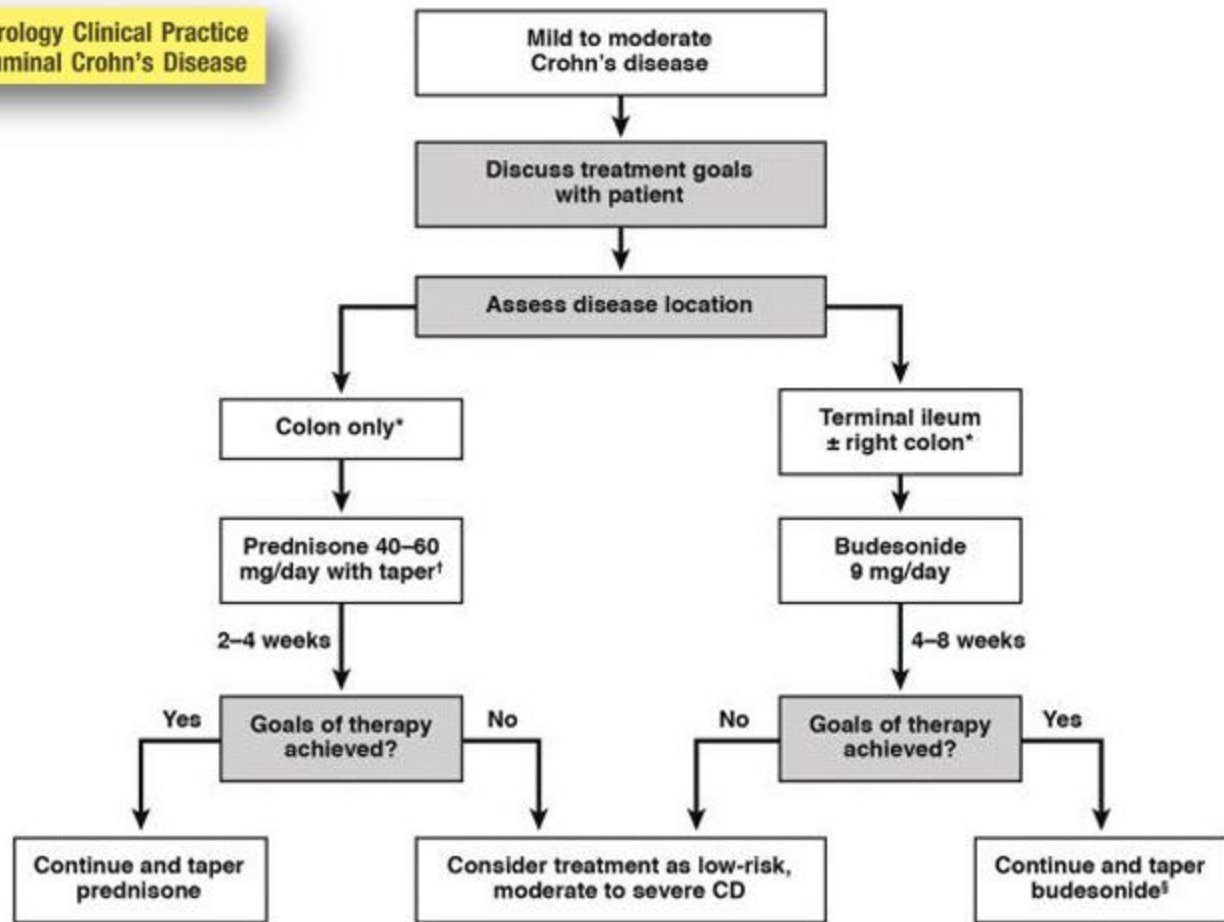
في حالات ال ileocecal كل ال Guideline كان الها قولاً واحد
بال 1st choise وهو ال Budesonide 9mg once daily
ولو فشل اما بنعطي Prednisolone او Biological Therapy

BSG recommended in Localized ileocecal disease
laparoscopic resection for those failing or relapsing after initial medical therapy, or in those
preferring surgery to continuation of drug therapy

□□ The End

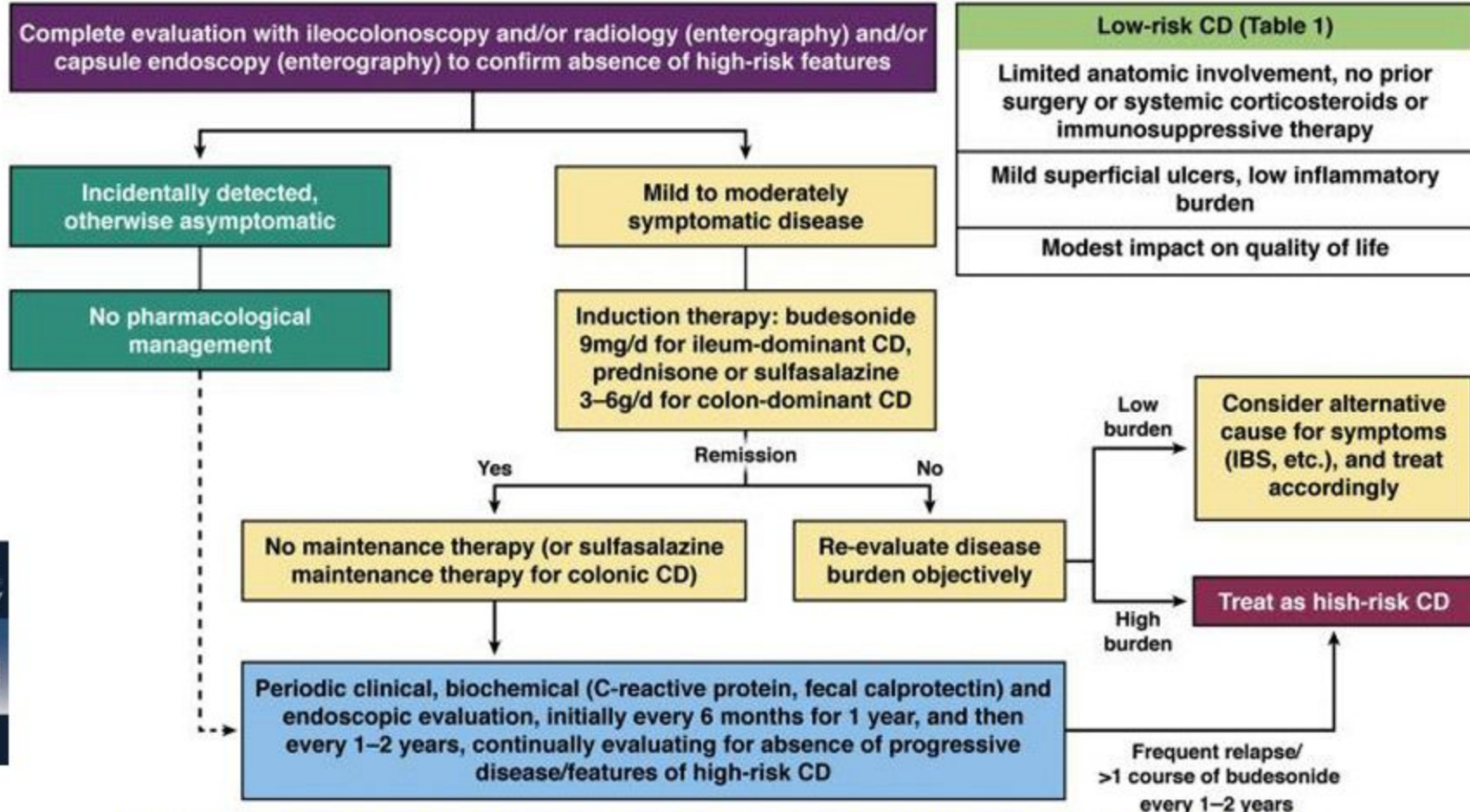
البوست القادم ان شاء الله حنكمل بال Moderate- Severe management

#لعلِّي_أفيدك ٤



*If patient has multiple risk factors for poor prognosis, consider moderate to severe algorithm. † Sulfasalazine may be used in mild colonic disease. § May consider thiopurine maintenance therapy.

Positioning Therapies in the Management of Crohn's Disease



Proposed algorithm for positioning therapies for patients with low-risk CD



... (Management of Moderate- Sever Crohns Disease (CD

لو مريض ال CD حسبنا ال Score وطلع Moderate-Sever
علاجه رح يكون حسب هل هو Low Risk ولا High Risk
وبالحالتين مفيش Role لاستخدام ال 5ASA ...

وحكينا سابقا انه ال low risk هو المريض اللي بيتم اكتشاف المرض وعمره اكبر من 30 سنه وبيكون مش Extended
ومعندوش Strictures ولا Fistula وبال endoscopy بتكون ال Ulcer سطحيه Superficial و With no prior surgery

اما ال High Risk pt هو المريض اللي تشخص CD وعمره اقل من 30 وكان Extensive وعامل Fistula او Strictures مع
Deep ulcer في ال Endoscopy
With Prioro Surgery

وال High Risk ممنووع نستخدمهم ال Corticosteroid
لانه في حالة وجود Fistula عند المريض ال Prednisolone بيزود ال Inflammation وفرصه حدوث Abscess و Sepsis

□□□□□□□□□□□□□□□□

.. □ Low Risk CD with Moderate-Sever Score

لو كان المريض low Risk بنبدأه ب Prednisolone بجرعه 40-60
فطالما فش Fistula بيكون ال Corticosteroid متاح

use for induction short term prednisolone at dose 40-60 mg for over 2-4 weeks then tapering over
.(3month or 0.5 -0.75 mg/kg (as bridge

؟لو المريض دخل بال Remission هيكمل Maintenance على ال Thiopurine

؟لو صار Fail لل Steroid Induction هنعامل المريض معامله ال .. High Risk

□ High Risk CD With Moderate-Sever score

مجرد ما كان المريض High Risk فالعلاج قولوا واحدا حيكون
Biological therapy
ك Induction و ك Maintenance □

فالمريض ممكن يبدأ ال 1st line على Infliximab او vedolizumab او ustekinumab

؟حسب ال Canadian Recommendation
المريض يبدأ على Infliximab وبنضيف معه Thiopurine

لو صار وفشل ال Infiximab بنضاعف الجرعه وبتابع المريض
لو مستجابه بنشفته ع ال vedolizumab ...
وممكن المريض من الاول يبدأ على ال vedolizumab او على ال ustekinumab

ال British برده ممكن المريض يبدأ على ال Infiximab او ال vedolizumab او ال ustekinumab
لكن ال british recommendation كانت مميزه انه اختيار ال biological Therapy حيعتمد على المريض

Choice between antiTNF therapy, ustekinumab and vedolizumab should be made on an individual basis, considering patient preference, cost, likely adherence, safety data and speed of response to the drug

فأضافو ال Risk Assessment

يعني في حال المريض كان عنده :
Prior Serious Infection 1

2 Prior Malignancy

3 Advanced Age, Comorbidities

لو كان عنده احد ال Risk السابقه و Moderate CD

فال 1st line هو ال vedolizumab

وال 2ed line هو ال ustekinumab

وينبعد عن ال Infiximab لانه زي ما حكينا سابقا انه ال Infiximab عليه US Boxed Warning وبيعمل

Serious infections & Malignancy

لو مثلا مريض عنده family history لل Lymphoma برده وينبعد عن ال Infiximab وينختار ال vedolizumab او ال ustekinumab

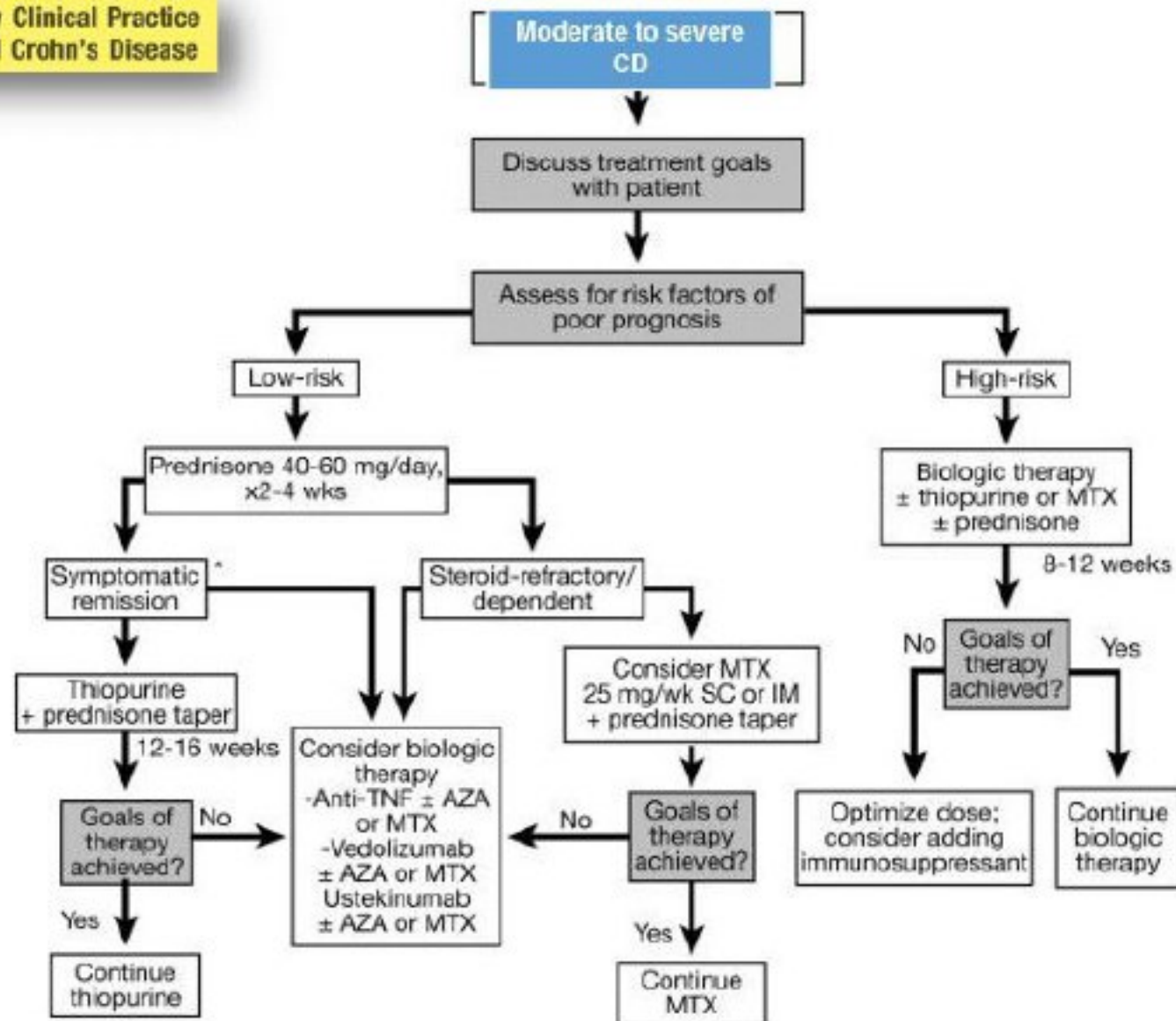
لو كان المريض عنده أحد ال Risk السابقه و Sever CD

فال 1st line هو ال ustekinumab

وال 2ed line هو ال Infiximab او ال Adalimumab

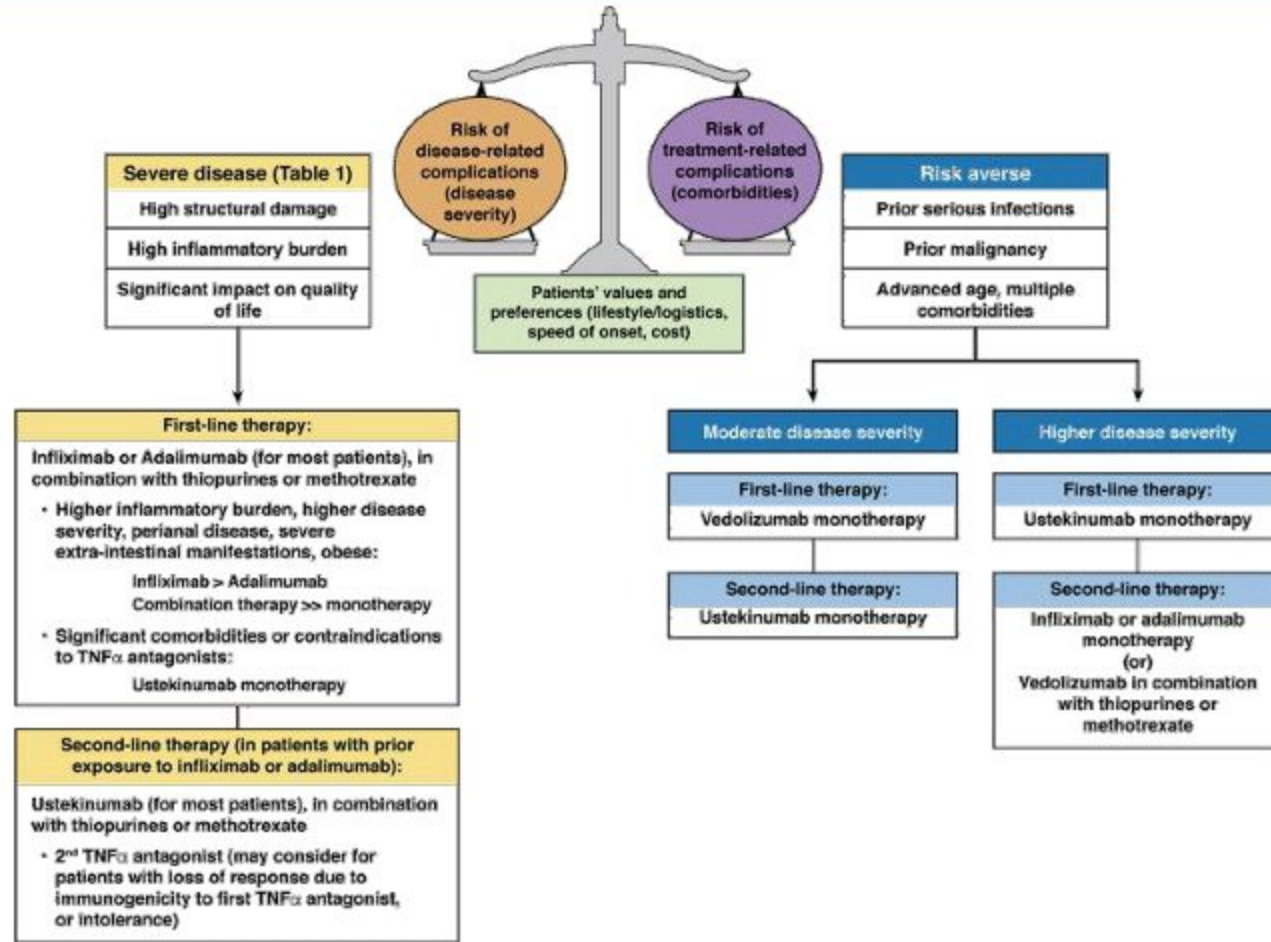
او ال vedolizumab مع ال Azathiopurone او ال MTx ...

#لعلي_أفيدك



*Initiation of biologic therapy may be an alternative pathway to thiopurines.

Positioning Therapies in the Management of Crohn's Disease



Proposed algorithm for positioning therapies for patients with high-risk CD



(GIT_38 #IBD #Crohns_Disease (CD#

شفنا سابقا في علاج ال CD كنا بنعتمد على ال Assessment score وال Risk assessment

وخلصنا بالبوستات السابقة علاج ال Mild وال Moderate وال Severe للحالات اللي Low Risk with No Fistula

وشفنا لو المريض كان High Risk ف العلاج سيكون Biological Therapy وحنبعد تماما عن ال Corticosteroids ...

اليوم ان شاء الله رح نكمل في ال
(Perianal fistulizing CD (Simple & Complex

مجرد ما يكون المريض CD fistulizing فالعلاج سيكون Aggressive عشان نقدر نبعد عن ال Surgery بقدر الامكان
لانه ال risk of Relapse بعد الجراحه اكثر من 50%

٤ أول شي لازم نستبعد ال Abscess ونعطي المريض Antibiotics قبل ما يبدأ بأي علاج

□□ Use Antibiotic (Abx) For Initial Management ..

Never start any treatment for fistulizing CD befor treat the Infection
عشان هيك لو كان المريض عنده Abscess اقل من 5 مل بنعطى Antibiotics لمدة شهرين

حسب ال Toronto وال ACG بياخد المريض :

Metronidazol 10-20 mg/kg/day for 4-8 week
and/Or Ciprofloxacin 500mg Twice Daily for 4-8 week
Or Levofloxacin 500-750mg once Daily for 4-8 week

□□According to UpToDate : □□

Crohn disease, treatment of simple perianal fistulas (off-label use): Oral: 500 mg twice daily for 4 weeks initially; if clinical response (ie, cessation of drainage and closure of fistula), continue at 250 mg 3 times daily for an additional 4 weeks
or 10 to 20 mg/kg/day in divided doses for 4 to 8 weeks with or without ciprofloxacin

ولو كان ال Abscess اكثر من 5ml بيحتاج Surgical Drain و Antibiotic لمدة 4-8 اسابيع

اعطاء ال Antibiotics هيفيد في حالات ال Simple Perianal Fistula ويعمل Healing
اما في حالات ال Complex Fistula ال Antibiotics مش هيكون Effective انه يعمل Healing بس علاقل بيساعد في
..... Symptoms لل Improve

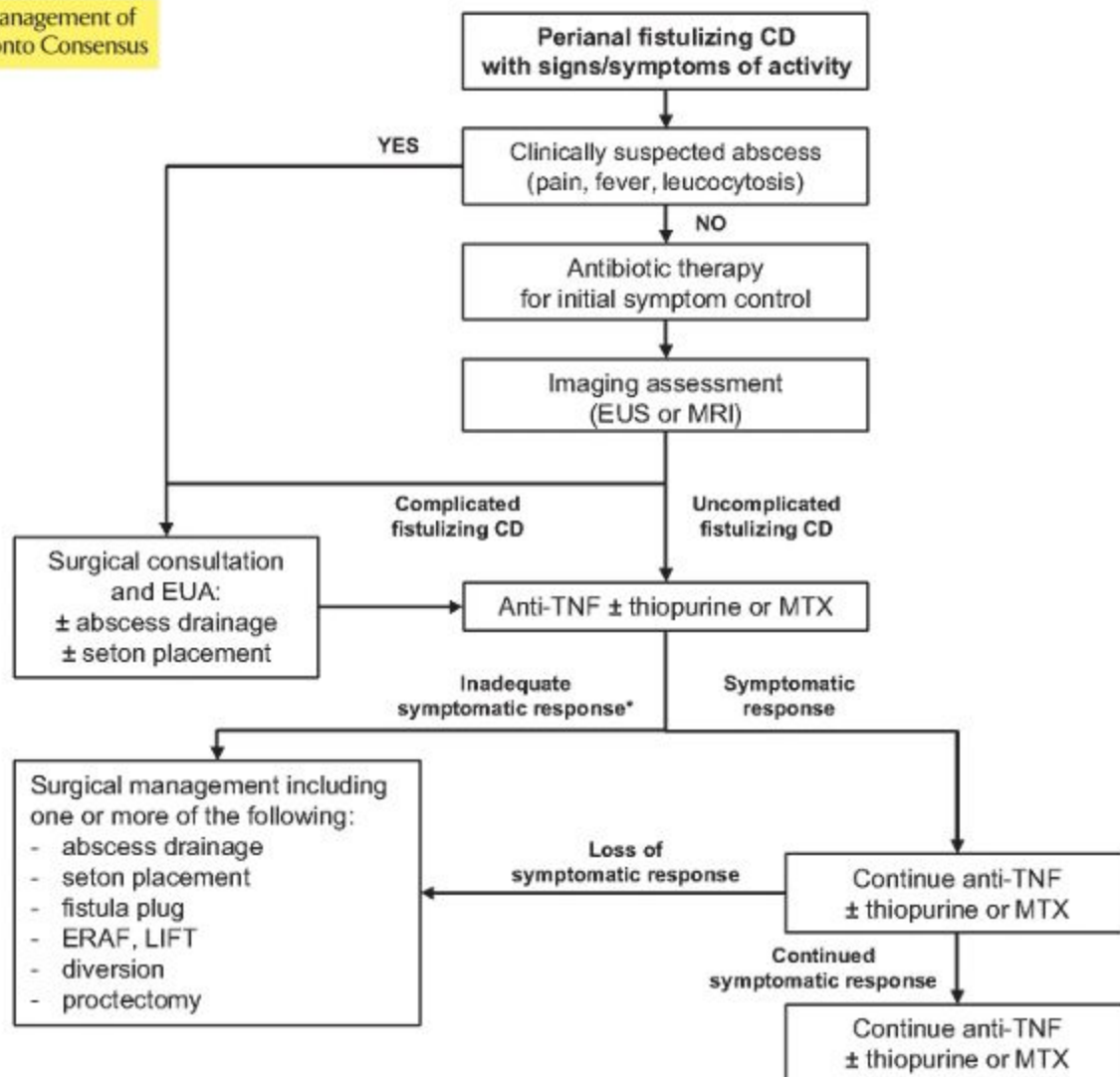
يبقى الخلاصة ٤ :

Moderate to severe biological therapy or steroids Dilation or surgery for strictures

في حالات ال Jejunol CD

Patients with jejunal or extensive small bowel disease have a worse prognosis and should be treated by biological therapy + nutritional therapy

#لعللي أفيدك

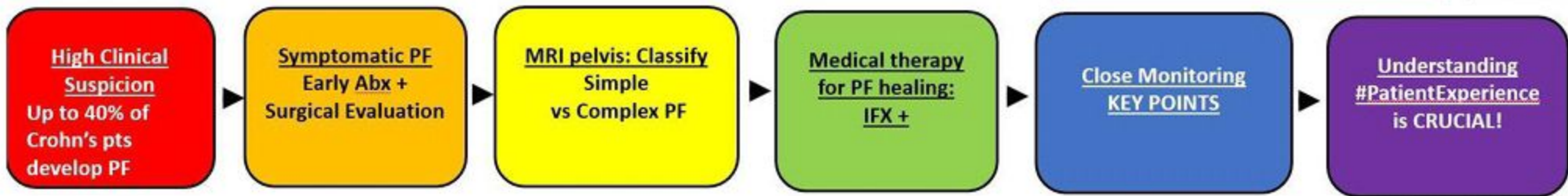


**Perianal
fistulizing
disease**

Crohn's Perianal Fistula Management

#MondayNightIBD @ibdseb
@jonathanseagal85

#IBDAlgorithm @DrMalSimons



Perianal Fistula
Symptoms:
drainage,
anorectal pain
+Exam

No abscess on Exam

- Antibiotics
- Imaging: MRI/EUS

Abscess on Exam /MRI

- Antibiotics
- MRI pelvis
- EUA: abscess
Drainage + Seton
placement

Simple =confined to
anal canal

- Can heal w Abx
Cipro>Metronidazole
- +/- Fistulotomy

Complex

- =Passes through or high
above sphincter
muscles; multiple
tracts/openings;
abscess; fistula to organ
- Seton if abscess
- +/-Seton if no abscess
- Needs IFX

Infliximab if:

- Proctitis
- Complex fistula
- Luminal disease

+IMM/Thiopurines

- To prevent ATI
- Full dose for combo
therapy optimization

+Antibiotics

- At least during
duration of induction
- Specially if no Seton

- Optimize IFX > 15mcg/ml,
if no response to
standard dose
- Assess drainage
- Repeat MRI: after
drainage stops to
document lack of activity
before removing Seton
- Seton removed after 4-6
maintenance dose?
And/or no activity on MRI
- Leaving Seton too long ->
epithelialization of tract
- Set realistic expectations
- If proctitis persists,
change therapy UST, VDZ,
IMM

• # PatientExperience

Most traumatic:

- 50% severe pain
- 25% emotional
distress
- ☹ this is likely a
underestimate ☹
- Remember psych
support !

If no PF healing,
despite mucosal
healing

- Chronic Seton
- MSC therapy
- Hyperbaric O2
- Injectable TNEi
- Flap
- Diversion



GIT_39 #IBD #Crohns_Disease CD# Surgery in CD patients

لو مريض ال CD بدأناله Medical Management و Fail وحيننتقل ل Option الجراحه ...
لازم نكون عارفين ال Risk of postoperative recurrence وهل بعد الجراحه هياخد ال medical management of CD ولا
ما بيلزمه

Pre surgical assessment ...

اول شي خلينا نشوف ال ...

Preoperative nutritional assessment should be performed

لازم ولا بد نعمل Assessment لل Nutrition state للمريض بعد ال surgery على حسب قديش الجراح رح يقص من ال
Bowel
ولو كان المريض عنده nutrition Deficiency فحيمشي ع enteral او parenteral nutrition حسب حالته ...

stop steroids prior Surgery

لو المريض ماشي ع Steroids بنعمله Tapering قبل العمليه
لانه ال Steroid بيقلل ال Healing وهيدخل العيان ب Sepsis ويتكل الله ٤
طيب فرضا كان مفيش وقت لايقاف ال Steroid والمريض محتاج Surgery فبهلحاله بيتركبله temporary stoma

Treat any Infection Prior Surgery

Preoperative antiTNF, vedolizumab and ustekinumab are safe and no need to stop

Intestine resection كيف حنتابعه ومتى بيلزمه Pharmacological management ...

المريض بعد الجراحه بنتعامل معه حسب ال Risk of Recurrence
هل هو low Risk او High Risk ?

Low Risk patient for Recurrence

Older patient (>50 y)
Nonsmoker

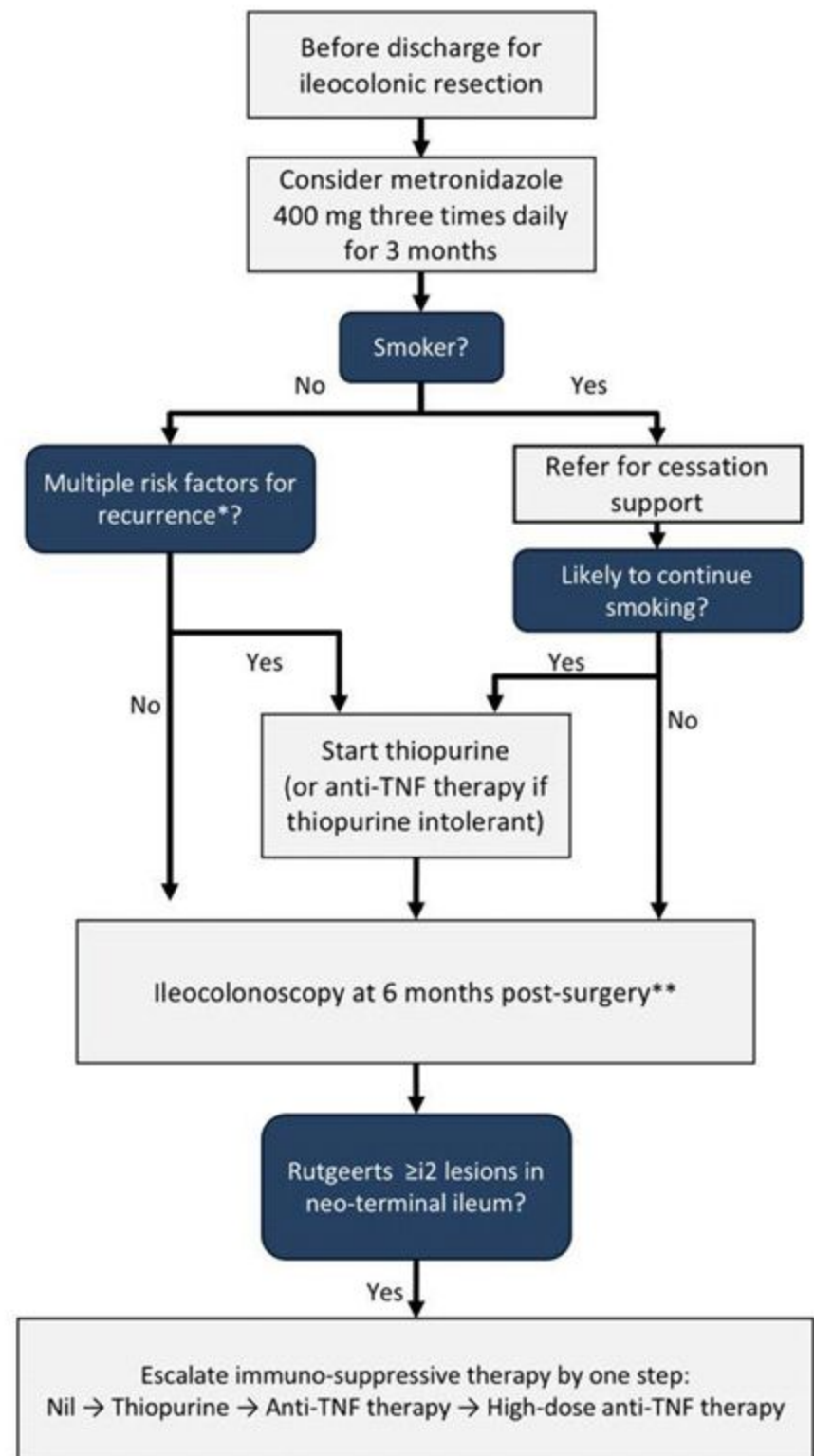
First surgery for a short segment of fibrostenotic disease (<10 to 20 cm)
Disease duration >10 y

High Risk patient

British Society of Gastroenterology consensus guidelines on the management of inflammatory bowel disease in adults

* Risk Factors for recurrence (two or more of):

- Smoking
- Penetrating disease
- Multiple resections
- Perianal fistulae
- Extensive small bowel disease
- Residual active disease
- Granulomas or myenteric plexitis



Risk of postoperative recurrence

RISK OF POST-OPERATIVE RECURRENCE.	
Low risk group:	Long-standing CD, first surgery, short stricture
Low/moderate risk group:	Less than 10 years of CD, long stricture or inflammatory CD
High risk group:	Penetrating disease, more than 2 previous CD-related intestinal resections, duration of disease, active cigarette smoking

Risk of postoperative recurrence

Illustrative Risk Groups for Recurrence of CD After Surgical Resection in the Absence of Any Intervention

Illustrative risk groups	Typical patient characteristics corresponding to risk category	Illustrative risk of clinical recurrence (>18 mo after surgery)	Illustrative risk of endoscopic recurrence (>18 mo after surgery)
Lower risk	- Older patient (>50 y) - Nonsmoker - First surgery for a short segment of fibrostenotic disease (<10 to 20 cm) - Disease duration >10 y	20%	30%
Higher risk	- Younger patient (<30 y) - Smoker ≥ 2 prior surgeries for penetrating disease, with or without perianal disease	50%	80%



لو افترضنا مريض مشى ع Infliximab بجرعه 5mg/kg والمريض ما استجاب هل نكمل ع نفس الدوا مع رفع الجرعه ولا نشفت المريض ع جروب علاجي ثاني؟؟

قرار انه نستمر ع ال Infliximab مع مضاعفه الجرعه او نوقف ال Infliximab ونشفت المريض ع جروب ثاني زي ال VEDOLIZUMAB او ال USTEKINUMAB

بيعتمد على حاجه بنسميها ال

(Therapeutic drug monitoring (TDM

فبناء على ال TDM زي ما حنشوف

في عنا احتمالين : إما المريض عنده من الاول Resistance للدوا

او إنه الجرعه غير كافيه

□□□□□□□□□□□□□□□□

لما المريض يمشي ع Infliximab المفترض يوصل لتركيز معين بالجسم عشان يوصل المريض لل Effect المطلوب

ف خلال ال Induction اول اسبوعين لازم يكون تركيز ال Infliximab في الدم $\leq 20-25$

وخلال 6 اسابيع من ال Induction لازم تركيز الدوا يكون $\leq 10-15$

وخلال ال maintenance لازم يكون التركيز $\leq 3-7$

طيب فرضا المريض بدأ ع Infliximab وموصلش لل Response

بنقيسله تركيز ال Infliximab بالدم (TDM) وبناء عليه بنقرر

.... □ Optimal Drug level

لو طلع تركيز الدوا Within Normal حسب القيم اللي فوق

ف هاد معناه انه المريض عنده Resistance من الدوا

والدوا مش حيشغل

والحل يتشفت ع مجموعه ثانيه زي ال VEDOLIZUMAB او ال USTEKINUMAB

... □ Suboptimal Drug Level

اما في حال كان مستوى ال Infliximab اقل من اللازم

بنفحص ال Infliximab Antibody level وبنشوف هل الجسم مكون Antibody ضد ال Infliximab او لا ؟

عنا ثلاث احتمالات لل . . Infliximab Drug Level

1□ Negative or Low Antibody Level

لو الاجسام المضادة اللي الجسم كونها ضد ال Infiximab كانت قليلة
معناته في فرصة انه ال Infiximab يشتغل
ف بنزود جرعه ال Infiximab ل 10mg/kg
او بنقل ال Frequency بسن الجرعات ممكن بدل 8 اسابيع يصير ياخذ الجرعه كل 6 اسابيع ...
وبنضيف للمريض Immunomodulator

2□ Intermediate Antibody level

بردو لو كانت قيمه الاجسام المضادة متوسطة ..
بردو بنرفع جرعه ال Infiximab او بنقل ال Frequency بين الجرعات وبنضيف للمريض ... Immunomodulator

3□ High Antibody

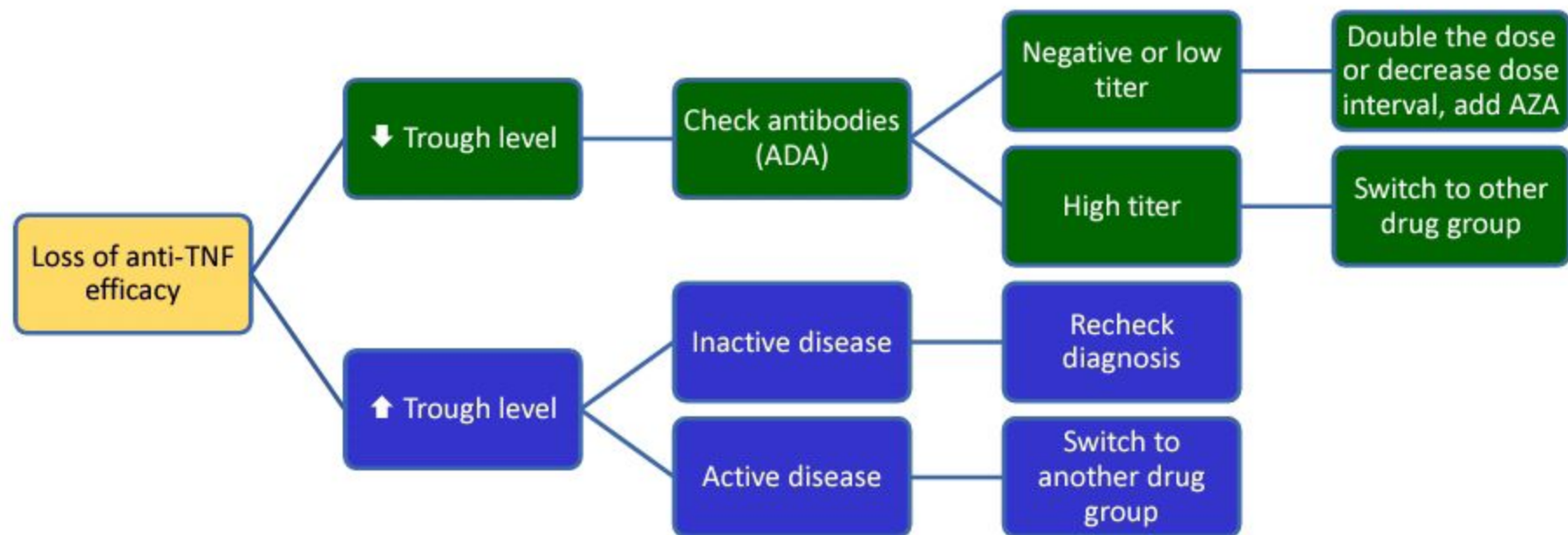
اما في حال الجسم كان مكون اجسام مضاده ضد ال Infiximab بكمية كبيره
بيكون ال Infiximab مش حيشغل و Fail وبنشفت المريض ع option ثاني ...

وهيك بنكون بفضل رب العالمين خلصنا ال IBD □

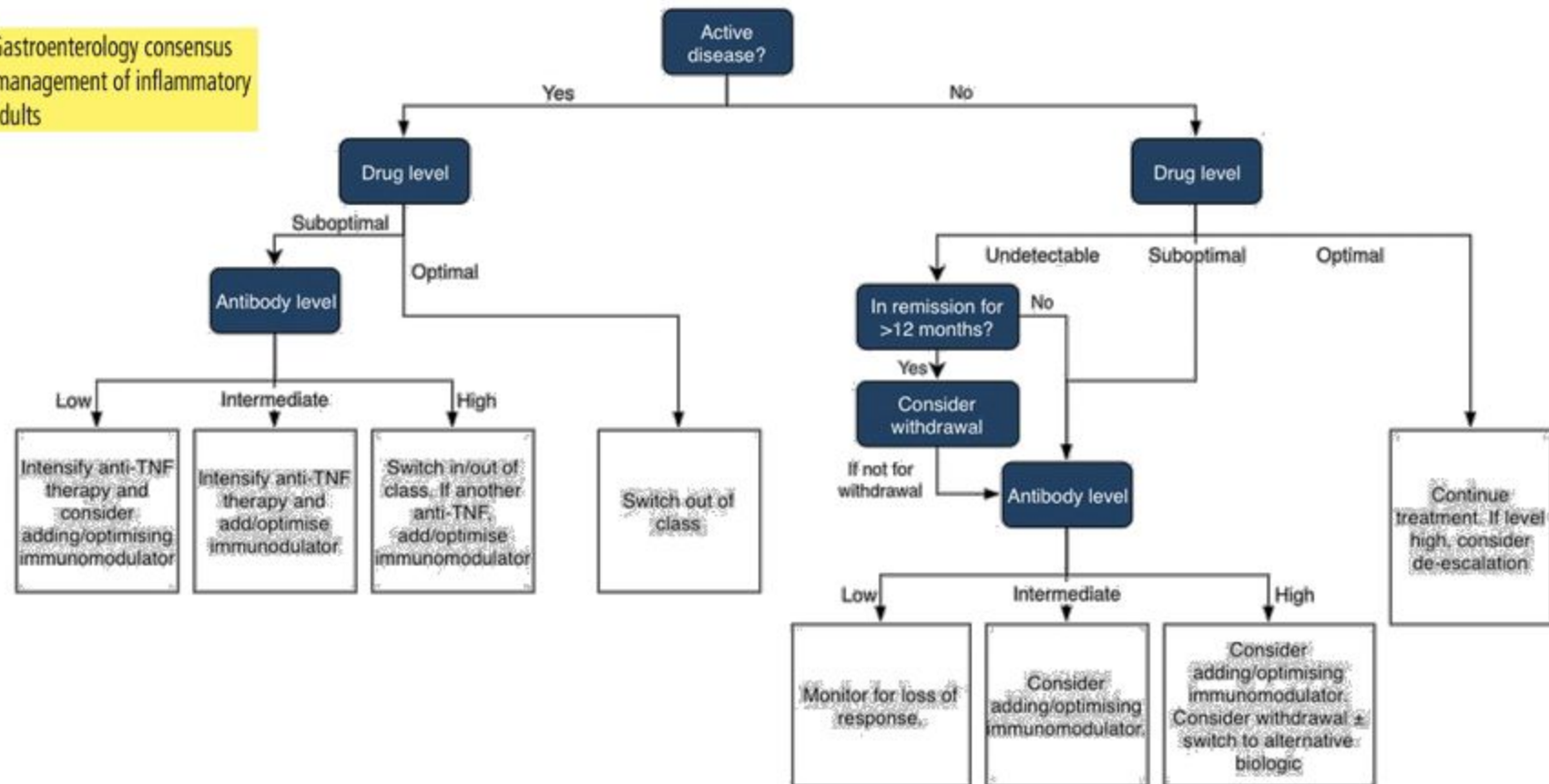
#لعلي_أفيدك □

Drug	Time point	Week	Drug concentration, mg/mL*
Infliximab	Induction	2	≥20–25
	Induction	6	≥10–15
	Postinduction	14	≥3–7
	Maintenance		≥3–7
Adalimumab	Postinduction	4	≥5–7
	Maintenance		≥5–8
*The higher drug concentration thresholds of the range are typically needed for achieving more stringent therapeutic outcomes, such as mucosal healing, and in patients with a more complicated IBD phenotype, such as fistulising CD or acute severe UC.			

Loss of Anti-TNF efficacy



Adding purines to anti-TNF ➡️ ↓ Antibody formation



Notes:

- 'Optimal' drug levels for infliximab and adalimumab are not defined, depend on the assay used, and clinical context
- After dose optimisation, the regular use of therapeutic drug monitoring in patients in remission is not currently recommended and further evidence of cost-effectiveness is awaited

= لا بص بقولك ايه أنا هكتئب معاك ؟؟؟ ؟

(GIT_41 #Irritable Bowel Syndrome (#IBS#

ف ال CNS بيبيعت اشارات لل GUT وعبر neurotransmitters زي ال Serotonin وغيره بغير بال GI motility ويعمل
Visceral Hypersensitivity

ف شكوة المريض ستكون Chronic Abdominal pain مع تغيير بال bowel habits
وبناء على ال Bowel habit ال IBS ينقسم ل Subtype بالاستعانة بال
Bristol stool form scale (BSFS) to record stool consistency

Diarrhea ال يكون ال predominant هو ال

ال predominant هو ال Constipation

Constipation & Diarrhea ال mix بيكون فى

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

تشخيص ال IBS باختصار يكون عبارة عن Role out لامراض ال GI

A clinical diagnosis of IBS requires the fulfillment of symptom-based diagnostic criteria and a limited evaluation to exclude underlying organic disease

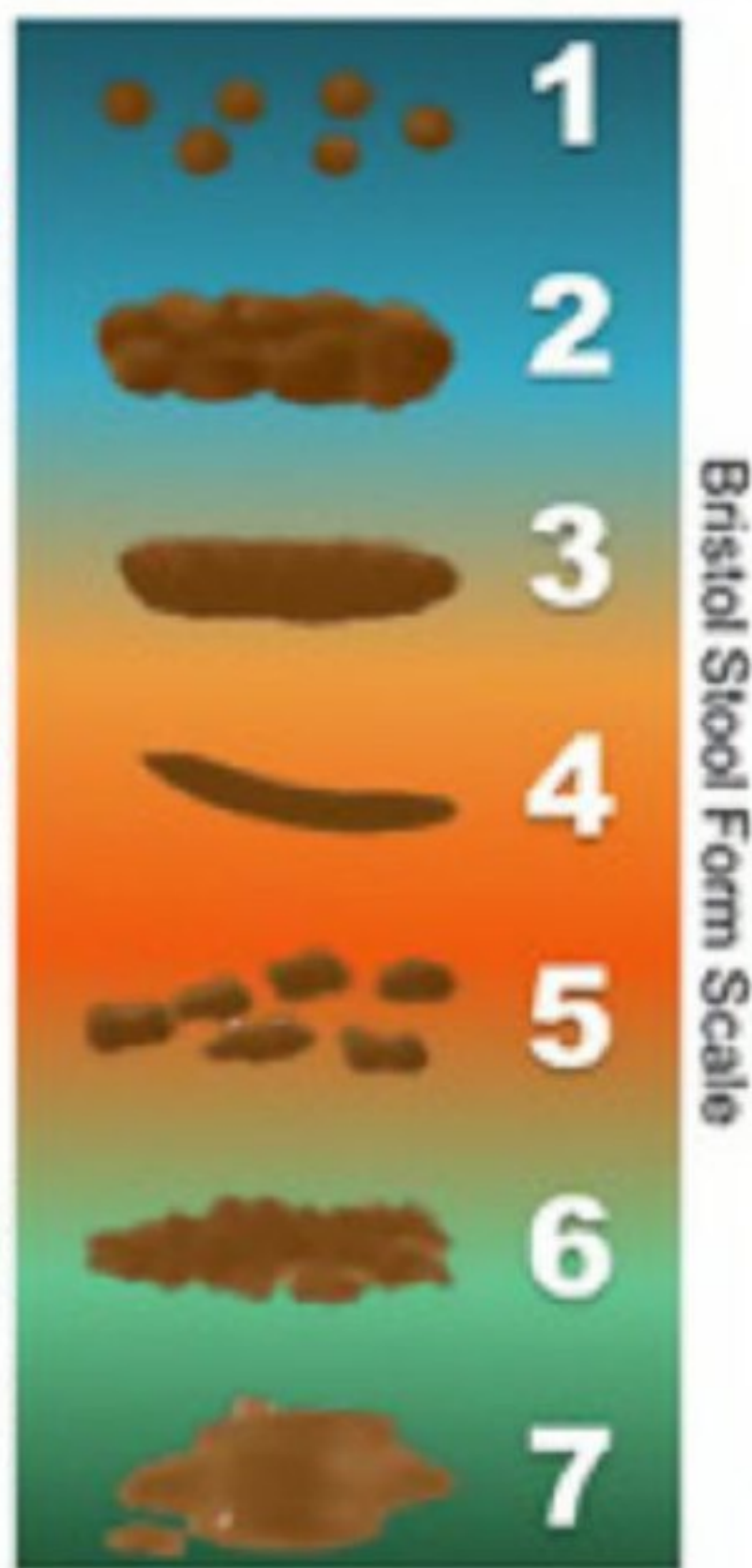
ولل Diagnoses يستخدم ROME 4 Criteria زي ما حنشوفها ان شاء الله البوست القادم ٤
#لعلي_أفيدك ٤

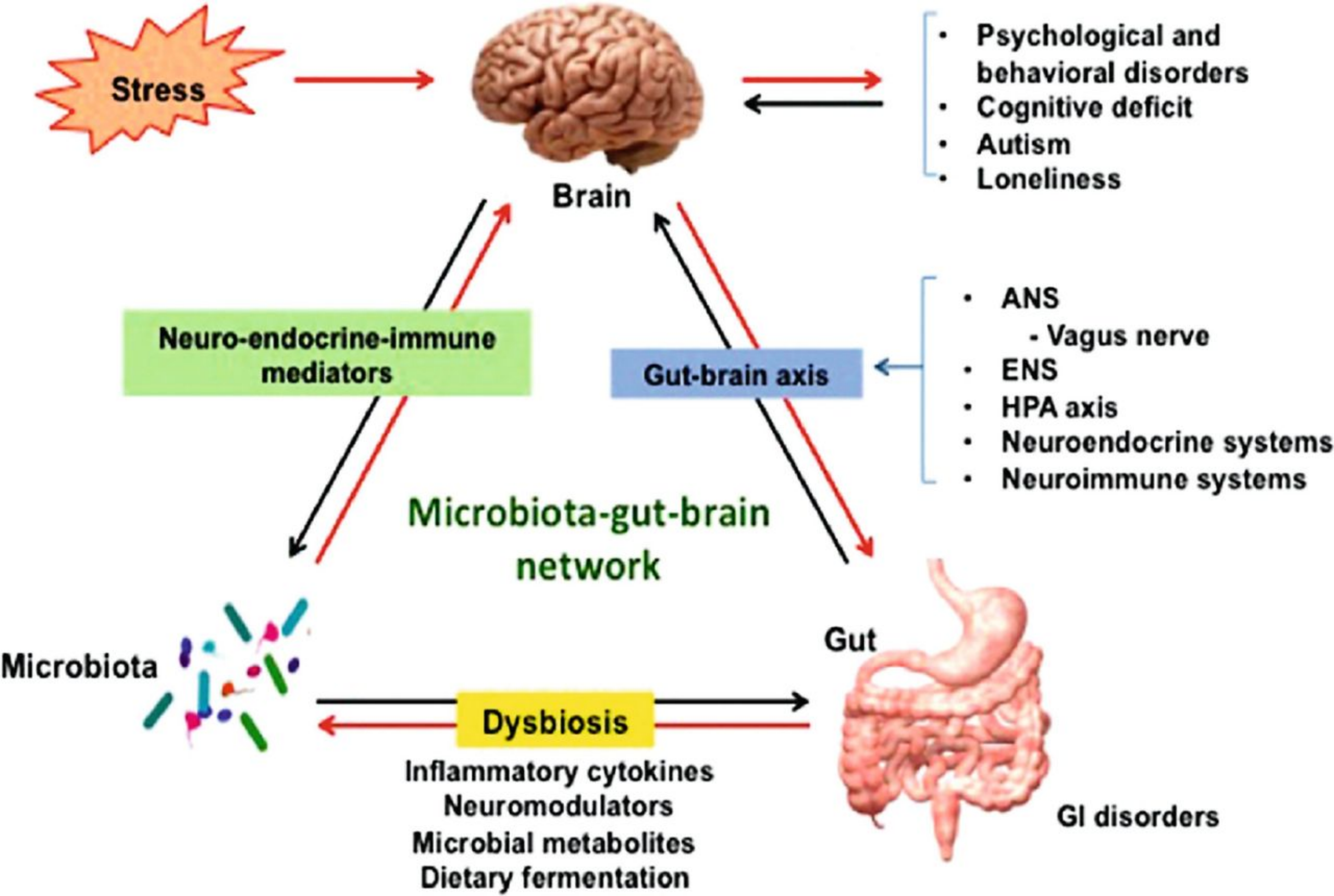
1B. IBS Subtypes Based on Bristol Stool Forms

IBS-C
Hard/lumpy stools $\geq 25\%$
Loose/watery stools $< 25\%$

IBS-M
Hard/lumpy stools $\geq 25\%$
Loose/watery stools $\geq 25\%$

IBS-D
Hard/lumpy stools $< 25\%$
Loose/watery stools $\geq 25\%$





كنا بدأنا بال Irritable Bowel Syndrom وعرفنا انها Subtype حسب شو ال هو ال Predominant symptom
ففي عنا IBS-D وفي IBS-C وفي IBS-M وفي IBS-U

اليوم ان شاء الله رح نكمل مع ال Criteria اللي بنستخدمها لتشخيص ال ... IBS

XXXXXXXXXXXXXXXXXXXX

Irritable bowel syndrome (IBS) should be suspected in patients with chronic abdominal pain and
(altered bowel habits (constipation and/or diarrhea

تشخيص ال IBS بيعتمد على ال

Excluding to other GI Disease + Perform ROME4 Criteria

Celiac disease ... وال IBD بنستبعد Diarrhea عنده

In patients with diarrhea, we perform the following

- Fecal calprotectin or fecal lactoferrin

لاستبعاد ال IBD

- Stool testing for giardia (antigen detection or nucleic acid amplification assay)

- Serologic testing for celiac disease

- C-reactive protein levels, only if fecal calprotectin and fecal lactoferrin cannot be performed

وبنستبعد اي ادوية بتعمل Diarrhea او Constipation

(الادويه اللي بتاثر ع ال GI Motility مرفقه بالصور)

XXXXXXXXXXXXXXXXXXXX

طيب شو هي ال Diagnostic criteria اللي بتستخدم لتشخيص ال IBS

في عنا كذا Criteria زي ال Kruis وال Manning وال Rome IV criteria

الاشهر والاكثر استخداما هي ال ROME4

According to the Rome IV criteria, IBS is defined as recurrent abdominal pain, on average, at least
one day per week in the last three months, associated with two or more of the following criteria :

- Related to defecation

- Associated with a change in stool frequency

- (•Associated with a change in stool form (appearance

يبقى لو المريض عنده Reccurent Abdominal pain مره اسبوعيا على الاقل خلال اخر 3 شهور مع نقطتين من النقاط
السابقه بدون وجود أي Alarm Symptom فيبتشخص IBS

اما لو المريض عنده Alarm symptom فيحتاج Further Evaluation

□Alarm Symptoms □

- Age of onset after age 50 years
- Rectal bleeding or melena
- Nocturnal diarrhea
- Progressive abdominal pain
- Unexplained weight loss
- Laboratory abnormalities (iron deficiency anemia, elevated C-reactive protein or fecal calprotectin/lactoferrin)
- Family history of IBD or colorectal cancer

نوقف لحد هنا والبوست القادم رح نكمل ان شاء الله مع ال Ttt

#لعلِّي أفيدك ٤

Table 1. Rome IV Diagnostic Criteria for IBS-D

IBS—Recurrent abdominal pain on average at least 1 d/wk in the last 3 mo that is associated with at least 2 of the following criteria^a:

1. Related to defecation
2. Associated with a change in frequency of stool
3. Associated with a change in form (appearance) of stool, with the IBS-D subtype identified with:
>25% Bristol stool types 6 or 7 and
<25% Bristol stool types 1 or 2

^a Criteria fulfilled for the last 3 mo, with symptom onset at least 6 mo prior to diagnosis.

IBS-D, irritable bowel syndrome with predominant diarrhea

Medications associated with diarrhea

System targeted by drug	Type of agent	Examples
Cardiovascular	Antiarrhythmics	Digoxin Procainamide Quinidine
	Antihypertensives	ACE inhibitors Angiotensin II receptor blockers* Beta blockers Hydralazine Methyldopa
	Cholesterol-lowering agents	Clofibrate Gemfibrozil Statins
	Diuretics	Acetazolamide Ethacrynic acid Furosemide
Central nervous system	Antianxiety drugs	Alprazolam Meprobamate
	Antiparkinsonian drugs	Levodopa
	Other agents	Anticholinergic agents Fluoxetine

Endocrine	Oral hypoglycemic agents	Metformin
	Thyroid replacement therapy	Synthroid
Gastrointestinal	Antiulcer/antacid drugs	H2RAs Magnesium-containing antacids Misoprostol Proton pump inhibitors
	Bile acids	Chenodeoxycholic acid Ursodeoxycholic acid
	Laxatives	Cathartics Lactulose Sorbitol
	Treatments for inflammatory bowel disease	5-aminosalicylates (particularly olsalazine)

Musculoskeletal	Gold salts	Auranofin
	Nonsteroidal antiinflammatory drugs	Ibuprofen Mefenamic acid Naproxen Phenylbutazone
	Treatments for periodic fever syndrome or gout	Colchicine
Other	Antibiotics ¶	Amoxicillin Ampicillin Cephalosporins Clindamycin Neomycin Tetracycline
	Antineoplastic agents	Many
	Dietary	Alcohol Sugar substitutes (eg, sorbitol)
	Vitamins	Magnesium Vitamin C

ACE: angiotensin-converting enzyme; H2RA: histamine-2 receptor antagonist.

* Olmesartan has been associated with sprue-like enteropathy.

¶ Most antibiotics have been associated with diarrhea.

Drugs associated with constipation

Analgesics

Anticholinergics

Antihistamines

Antispasmodics

Antidepressants

Antipsychotics

Cation-containing agents

Iron supplements

Aluminum (antacids, sucralfate)

Barium

Neurally active agents

Opiates

Antihypertensives

Ganglionic blockers

Vinca alkaloids

Calcium channel blockers

5HT₃ antagonists

Manning criteria for the diagnosis of irritable bowel syndrome*

Pain relieved with defecation
More frequent stools at the onset of pain
Looser stools at the onset of pain
Visible abdominal distention
Passage of mucus
Sensation of incomplete evacuation

في البوستات السابقة عرّفنا ال IBS وعرفنا انه عبارة Chronic Abdomonal pain سيكون معه تغير بال Bowel Habit بدون وجود أي Organic Dysfunction

وقسمنا ال IBS ل Subtype على حسب ال Predominant symptoms ف وارد يكون ال IBS معه diarrhea وينسميه IBS-D

او Constipation وينسميه IBS-C

او mixed مرات Diarrhea ومرات Constipation فبنسميه IBS-M

او يكون Unclassified (IBS-U)

رومان أدق تعريف حسب ال ROME4 Criteria ↓↓

- **Irritable bowel syndrome (IBS)** - Irritable bowel syndrome is defined as recurrent abdominal pain on average, at least one day per week in the last three months with two or more of the following: related to defecation, associated with a change in frequency of stool, or associated with a change in form (appearance) of stool

واتفقا انه وجود اي Alarm symptoms يبيلزم المريض Further Evaluation لاستبعاد ال Other GI disease ..
حنكمل مع اخر جزء بال IBS ↓↓

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

□ Treatment of IBS □

□ In patients with mild and intermittent symptoms that do not impair quality of life, we initially recommend lifestyle and dietary modification alone rather than specific pharmacologic agents.

□ In patients with mild to moderate symptoms who fail to respond to initial management and in patients with moderate to severe symptoms that affect quality of life, we suggest pharmacologic therapy as adjunctive treatment

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

من اهم ال Dietary modifications التي ننصح فيها المريض :

Patients with IBS may benefit from exclusion of gas-producing foods; a diet low in fermentable oligo-, di-, and monosaccharides and polyols (FODMAPs); and in select cases, lactose avoidance as in ... Lacose Intolerance Pateint
(ال Diet اللّی , بتحتوی علی ال FODMAPs مرفقه مع الصور)

لو كان ال Life style modifications غير كافى والمريض متحسنش ساعتها باندخل على ال Pharmacological Option

□□.□□ treatment should be based on the predominant symptom and subtype

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علاج ال Constipation لمرضى ال IBS-C

lubiprostone, linaclootide, or plecanatide

PEG (Osmatic Laxative)

مشكله ال PEG انها بتزود ال

Flatulenceabdominal distention&

وما بتحسن ال IBS Symptom

□□ lubiprostone

Lubiprostone is used for treatment of IBS-C in women 18 years and older

الميكانزم لل lubiprostone انه يفتح chloride Channel

فبیزود ال Water Influx داخل ال Lumen

جرعته

Females ≥ 18 years: Oral: 8 mcg twice daily

Hepatic Impairment .. وبتتعدل جرعتہ لو فی

□□ Linaclootide (290 micrograms daily) / plecanatide (3 mg once daily)

are guanylate cyclase agonists that stimulates intestinal fluid secretion and transit.

their role in the treatment of IBS-C is limited to patients with persistent constipation despite treatment with PEG

ممنوع استخدامهم للى اقل من 18 سنه ...

hydroxytryptamine (serotonin) 4 receptor agonists : tegaserod-5

ال Tegaserod يحسن ال Abdominal pain ويقلل ال Constipation وال Dyspepsia

لكنه لا يستخدم الا في حالات ال Emergency IBS ول Short term لانّه ال CVS SE

□A history of ischemic colitis, intestinal ischemia, bowel obstruction or adhesions, symptomatic gallbladder disease, and suspected Sphincter of Oddi dysfunction are some of the contraindications to the use of tegaserod.

□□Sodium/hydrogen exchanger 3 (NHE3) inhibitor (Tenapanor)

a sodium/hydrogen exchanger 3 reduces the absorption of sodium and phosphate and enhances intestinal fluid volume and transit

Dose : 50 mg twice daily.

Diarrhea, abdominal distension, flatulence and dizziness were the most frequent side effect

نوقف لحد هنا والبوست القادم رح نكمل مع باقي الادويه اللي بتستخدم لعلاج ال IBS

#لعلي_أفيدك ٤



Mild

Education, reassurance, stress management

Fiber, exercise,
fluid intake

Trial diet excluding
lactose and caffeine;
other dietary changes

Moderate

Osmotic laxative
Antispasmodic agent

Loperamide
Antispasmodic agent

Serotonin-4
agonist?

Antispasmodic agent
Tricyclic anti-
depressant

Severe

Tricyclic antidepressant, psychotherapy, sedative with antispasmodic agent

Serotonin-4
agonist

Serotonin-3
antagonist

Serotonin-3
antagonist
if diarrhea occurs

Constipation-predominant IBS

Diarrhea-predominant IBS

Abdominal Pain & Bloating

Mild:

Education, stress management, diet, exercise

Moderate:

Osmotic Laxative:

- Polyethylene Glycol (Miralax)

Antidiarrheal agent:

- Loperamide (Imodium)
- Bile acid sequestrants

Antispasmodic agent:

- peppermint oil
- dicyclomine, hyoscyamine

Persistent:

Prescription Laxative:

- Cl channel activator (lubiprostone)
- Guan Cycl agonist (linaclotide)

- Antibiotic (rifaximin)

- 5-HT₃ antagonist (alosetron);
for women with treatment
refractory symptoms $\geq$ 6 months

Tricyclic antidepressant:

- amitriptyline
- imipramine
- nortriptyline
SSRIs?

Drug Options for Treating IBS-C

People with IBS-C often feel like they are not able to complete a bowel movement, and pass hard, lumpy stools at least 25 percent of the time.

	Linacotide	Lubiprostone	Polyethylene Glycol (PEG) Laxatives
Lessens belly pain	●	●	—
Increases number of complete bowel movements	●	—	●
Improves general IBS-C symptoms	●	●	●
Improves quality of life	●	●	●
Cost	Higher cost	Higher cost	Lower-cost option
May cause diarrhea	●	●	●
Quality of scientific evidence	High	Moderate	Low. More research is needed.
Notes	One of the most effective drugs for IBS-C. May cause diarrhea, but is mild to moderate in most patients. May take up to 12 weeks for belly pain to get better.	Has been shown to effectively treat IBS-C. Most patients report very few side effects.	Safe and low cost, but it is unsure whether they are effective in helping all symptoms tied to IBS. Patients may get more benefit in using PEG laxatives in combination with another drug.



The information provided by the AGA Institute is not medical advice and should not be considered a replacement for seeing a medical professional.

Characteristics and sources of common FODMAPs

	Word that corresponds to letter in acronym	Compounds in this category	Foods that contain these compounds
F	Fermentable		
O	Oligosaccharides	Fructans, galacto-oligosaccharides	Wheat, barley, rye, onion, leek, white part of spring onion, garlic, shallots, artichokes, beetroot, fennel, peas, chicory, pistachio, cashews, legumes, lentils, and chickpeas
D	Disaccharides	Lactose	Milk, custard, ice cream, and yogurt

M	Monosaccharides	"Free fructose" (fructose in excess of glucose)	Apples, pears, mangoes, cherries, watermelon, asparagus, sugar snap peas, honey, high-fructose corn syrup
A	And		
P	Polyols	Sorbitol, mannitol, maltitol, and xylitol	Apples, pears, apricots, cherries, nectarines, peaches, plums, watermelon, mushrooms, cauliflower, artificially sweetened chewing gum and confectionery

FODMAPs: fermentable oligosaccharides, disaccharides, monosaccharides, and polyols.

**The AGA recommends using linaclotide
(over no drug treatment) in patients with
IBS-C. (*Strong recommendation; High-quality
evidence*)**

2. Should Lubiprostone Be Used in Patients With [IBS-C](#)?

There are 2 randomized controlled trials of 12-week duration examining the effectiveness of lubiprostone for global symptom relief in patients with IBS-C, with a pooled effect estimate showing a small improvement in global symptoms of [IBS](#). There were few adverse effects from using lubiprostone.

The [AGA](#) suggests using lubiprostone (over no drug treatment) in patients with IBS-C. (*Conditional recommendation; Moderate-quality evidence*)

Comments: *Patients who place a high value on avoiding higher out-of-pocket expenses associated with lubiprostone may prefer alternate treatments.*

**The AGA suggests using lubiprostone (over no drug treatment) in patients with IBS-C.
(*Conditional recommendation; Moderate-quality evidence*)**

شفنا اليوست السابق الادويه اللي بتستخدم لعلاج ال Constipation في حالات ال IBS-C حنكمل مع باقي الادوية اللي بتستخدم لباقي انواع ال IBS

لو المريض كان عنده ال Predominant symptom هو ال IBS-D (Diarrhea) فبتستخدمه Antidiarrheal Drug ↓↓

In patients with diarrhea-predominant symptoms, we use antidiarrheals (eg, loperamide) as initial treatment and use bile acid sequestrants as second-line therapy.

: 1 Loperamide

بينعطى قبل الاكل ب 45 دقيقه

loperamide 2-4 mg orally initially, followed by 2 mg after each loose stool when required, maximum 16 mg/day

2 Eluxadoline 75-100 mg orally twice daily

Eluxadoline is contraindicated in patients without a gallbladder or in patients with heavy alcohol usage because of increased risk of pancreatitis resulting in hospitalisation or death.

(3 Bile acid sequestrants (cholestyramine

بيستخدم ال cholestyramine في حال فشلت ال Antidiarrheal drug السابقه ،، ويفضل استخدامه في حالات ال cholecystectomy

□ Colestyramine may be more effective than loperamide in patients who have had a cholecystectomy.

4 5-hydroxytryptamine (serotonin) 3 receptor antagonists — Alosetron

alosetron 0.5 to 1 mg orally twice daily

تاتي مجموعه دوائية تستخدم لل IBS هي ال antispasmodics وبتستخدمها لل Pain

□ In patients with abdominal pain due to IBS, we use antispasmodics on an as-needed basis

لو المريض كان IBS-C بنبدأه بال Laxative لعلاج ال Constipation وما صار استجابته وضل ال Pain موجود ،ساعتها

Antispasmodic ال المريض

□ In patients with IBS with constipation, we initiate antispasmodics only if the abdominal pain persists despite treatment of constipation

□ In patients with persistent abdominal pain despite antispasmodics, we recommend a trial of antidepressants.

□ In patients with moderate to severe IBS without constipation, particularly those with bloating, who have failed to respond to other therapies, we suggest a two-week trial of rifaximin

شو هي ال Antispasmodic drug المتاحه لل IBS ..

□ Anticholinergic

زي ال Hyoscin وال dicyclomine

مشكلاتهم انهم يعملو (Atropin like Action) Systemic SE

□ Locally Smooth Muscle Relaxant

Mebeverine (Colona®) زي ال

C: peppermint oil : reduce stimulated colonic motor activity and may be beneficial in patients with postprandial abdominal pain, gas, bloating, and fecal urgency

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يبقى لو المريض عالج ال Predominant Symptom سواء كانت Diarrhea او Constipation ولسه عنده Pain

Antispasmodic يبدأ يأخذ

طبيب لو أخذ Antispasmodic وال Pain مخفش ،ساعتها بنعطى antidepressants

☐ Antidepressant

(□ Tricyclic antidepressants (TCAs

ال TCAs ينعطي لل IBS-D ولا يفضل اعطاءه لل IBS-C لانه بي Worsen ال Constipation

Amitriptyline, nortriptyline, and imipramine can be started at a dose of 10 to 25 mg at bedtime.

Desipramine should be started at a dose of 12.5 to 25 mg at bedtime

(□ SSRIs (Selective Serotonin Reuptake Inhibitor

ال SSRIس كويس لحالات ال Mixed IBS

❓ لو المريض مستجابش ع كل الادويه السابقه بنمشيه ع

week trial of Antibiotic 2

وال Antibiotic المفضل في هادي الحالة هو ال rifaximin

Oral: 550 mg 3 times daily for 14 days

Antibiotics — While antibiotics should not be routinely recommended in all patients with IBS, in patients with moderate to severe IBS without constipation, particularly those with bloating, who have failed to respond to other therapies (eg, a diet low in fermentable oligo-, di-, and monosaccharides and polyols [FODMAPs], antispasmodics, and TCAs), we suggest a two-week trial of rifaximin

#لعلی أفیدك ؟